EAST POINT SCHOOL
BUSINESS STUDIES ASSIGNMENT
CHAPTER-9 INTERNAL TRADE

Q1. Departmental stores make shopping convenient.Comment.

Q2. In Modern times, the importance of trade has increased as new products are being developed every day, consumers have higher expectations and wan t to select /choose from a wide variety of products. Business, therefore, has to satisfy consumersbymakinggoodsavailableattherighttimeandthattoothroughoutthe world. Manufacturers have been expanding their business operations and producing variety of products in large quantities. Their dependency on intermediaries or middlemen has increased, who act as major links between the manufacturers andconsumers.

Identify these middlemen and state their services towards the manufacturers.

Q3. If the wholesaler is eliminated, what difficulties do you think the manufacturers would have toface.

English

Q1 Read the passage given below and on the basis of your understanding of the passage, answer ANY TEN questions for the eleven given below

1.The sage of science, Einstein, was sitting in a depressive and pensive mood one evening, His eyes were brimming with seas. The pain was evident on his face. He peeped out of the window of his room. The sun had set a few minutes back. The sky was filled with a reddish glow. At this sunset, he ah darkness and the reddish glow in the sky was the blood of humanity spilling all over the sky from earth t that it was humanity that had sunk into with tied steps. he walked back to his chair and settled down. It was the 9th of August 1945. Three days hack. he bad felt the same agony as if someone had torn him apart. He was deeply hurt and depressed when he heard on the radio that America had bomb was dropped an atom bomb on the Japanese city, Hiroshima. Today, within three days another bomb was dropped on another city, Nagasaki and lakhs of people had been killed.

2. As the news of the atomic attack reached Einstein, and he became aware of the glaring horror of the abuse of atomic energy, his distress and restlessness knew no bounds. He could not control himself and picked up his violin to turn his mind on to other things. While playing the violin, he used to dissolve his distress in in sad notes, but couldn't. He was burning on the embers of destruction; his heart was filled with an ocean of agony and tears just continued streaminguncontrollably out of his eyes. Night had fallen His daughter came up and asked him to eat something as he had not taken anything for the last four days. His voice was restrained and he said. "I don’t feel like eating”.

3 He could not sleep that night. Lying down, he was thinking how he had drawn the attention of the then American President Roosevelt towards the destructive powers of an atomic bomb. He had thought that this would be used to scare Hitler and put an end to the barbarism thru Hitler was up to However, Roosevelt kept him in the dark and made false promises. Eventually. he had abused Einstein's equation of E=mc2 that resulted in the destructive experiments His actions had made science and scientists as murdered. Einstein kept on thinking for a long time Eventually. he slipped into sleep. When he woke up at dawn, therewas a new dawn in him too The atomic threat had transformed the heart.

4. The next day, he decided to disassociate himself from the scientific policy of the government and all governmental Institutions. He decided to open educational institutions for children, adolescents and youth-institutions where along with science. spirituality will be compulsorily taught.

5. To inaugurate this institution, he had invited two great philosophers. Bertrand Russell and Albert Schweitzer. Ten other great scientists who had won Nobel Prizes in different fields were also invited. They all saw a different Einstein, not a great scientist but a sage in him. The institution was opened by garlanding a photo of Mahatma. While garlanding the Mahatma,he became emotional and said with a lump in his throat. "I bow down to the great man who fought for the independence of his country through non-violence. He could do so because he was a truthful man and true spiritualist."

6. Those who teach science should be taught spirituality too. Without harmony between science and spirituality, the destruction would continue unabated. A few years after this institution was built, a Japanese delegation came to meet him. Einstein broke down in the meeting and said. "You can give me any punishment and I will accept it. Anyway, I have decided to lead my life in penitence." The Japanese were moved by his sincerity and forest their grief.

I.. Besides two great philosophers how many other scientists were invited by Einstein to inaugurate the institution where spirituality would be compulsorily taught?,

A.Five

b. Ten

C.Eight

d. Fifteen

ii. Which musical instrument did Einstein play when he was in grief ?

b. Guitar

d. Flute

c Violin

A. Harmonium

iii. Einstein came to know that America had dropped an atom bomb on the Japanese city, Hiroshima through:

A.television

b. newspaper

C.radio

d. a telephonic message

iv. Which American President was told about the destructive power of an atomic bomb?

a. Kennedy

B.Bill Clinton

c. Lincoln

d. Roosevelt

5. Einstein said to the Japanes delegation, .

A."I am not at fault

b. "You can give me any punishment and I will accept it

C."What could I do?"

d. "The President didn't agree to my advice."

vi. What did Einstein do to show his displeasure over the atomic attack?

A. He picked up his violin and tried to dissolve his distress in in sad notes.

b. He did not eat anything for four days.

c He decided to disassociate himself from the scientific policy of the government and all government institution

d. He could not not sleep that night and kept on thinking about the destructive powers of an atomic bomb

vii. Whose photo was garlanded at the inauguration of Einstein's institute for children, adolescents and youth?

A.American President Roosevelt

b Bertrand Russell

C.Albert Schweden

d. Mahatma Gandhi

vili. Why did Einstein want harmony between science and spirituality while teaching in educational institutes ?

A. Harmony will put an end to destruction

b. Along with science, spirituality must be compulsorily taught to teach non-violence. C.Without harmony between science and spirituality the destruction would continue unabated.

d. All of the above

ix What did Einstein feel while looking at the sunset from his rooms window 2.

A. The sun had set a few minutes back the sky was filled with a reddish glow.

b. It was humanity that had sunk into devilish darkness and the reddish glow in the sky was the blood of humani spilling all over the sky from carth,

c He felt the agony as if someone had to him apart. He was deeply hurt and depressed.

D. Both b and c

X. Pick out the word from the passage which means the same as 'mental pain'.

A. Depressive

b. Pensive

C. Agony

d. Hurt

xi. Pick out the word from the passage which means the same as Agreement

a Harmony

b Unabated

c. Penitence

d. Grief

Q2. Read the passage given below and on the basis of your understanding of the passage, answer ANY TEN questions for the eleven given below:

1. Once an organ donor's family gives its consent and the organs are matched to a recipient, medical professionals are faced with the onerous challenge of transporting organs while ensuring that the harvested organ reaches its destinationin the shortest possible time. This is done in order to preserve the harvested organs and involves the police and especially the traffic police department

The traditional method of transporting organs by road is referred to as a green corridor'. This process entails police escorting an ambulance, so as to move around traffic - usually a specific traffic lane is chosen and all signals on the route stay green to ensure it reaches its destination in the shortest possible time. A green corridor is a route cleared and cordoned off by the traffic police to ensure the smooth and steady transportation of harvested organs, on most occasions to those awaiting a life-saving transplant. Organs tend to have a very short preservation time, such as the heart, which has to be harvested and transplanted within four hours or the lungs, which can be preserved for only six hours once they are harvested.

3. The first green corridor in India was created by the Chennai Traffic Police in September 2008 when they accomplished their task of enabling an ambulance to reach its destination within 11 minutes during peak hour traffic. That organ saved a nine-year-old girl whose life depended on the transplant.

4. Similarly, such green corridors have been created by traffic police of various cities such as Pune, Mumbai, Delhi NCR, etc. Personnel are stationed at selected points to divert, control and clear the traffic giving way to the ambulance. Apart from this, a motorcade of police vehicles accompanies the ambulance ensuring that it does not face any problems. Delhi Traffic Police provided a green corridor from IGI Airport to the Institute of Liver and Biliary Sciences in Vasant Kunj for transportation of a liver. The distance of 14 kms was covered in 11 minutes.

5. Experts point out the lack of a robust system to transport organs to super speciality hospitals in least possible time. The National Organ and Tissue Transplant Organisation (NOTTO), the country's apex organ donation agency, is now framing a proposal to airlift cadaver organs and will send a report to the Union Health Ministry Cadre organs have a short life and so transplant should be done within a few golden hours," Director (NOTTO) expressed "Therefore, we are preparing a proposal for airlifting organs at any given moment."

6 Most States de not have enough well-trainedexperts to retrieve or perform transplant procedures. Also, there is an acute shortage of advanced healthcare facilities to carry out a transplant So, it is referred to other big centres in metropolitan cities. Organs retrieved from Aurangabad Indore, Surat, Pune are sent to Mumbai as these cities do not have super specialty healthcare centres, informed official

7. "In India, about fifty thousand to one lakh patients are suffering from acute heart failure and need heart transplant at any point of time. In a private t-up, a heart transplant cost ₹15 - 20 lakhs, which is followed up by post operative medication of about ₹30,000 per month lifelong.

1.The first green corridor in India was created in_____

A. New Delhi

B. Chennai

C. Mumbai

d. Pune

ii. The organisation which is framing a proposal to airlift cadaver organs is

A.Union Health Ministry

b. Regional Organ and Tissue Transplant Organisation

C National Organ and The Transplant Organisation

d. State Organ and Tissue Transplant Organisation .

3. The onerous task that the author is talking about in para is:

a. finding organ donors.

B. finding doctor capable of performing transplant.

C. To arrange the requisite facilities for the transplant

D.. to carry the harvested organ in the shortest possible time.

4. Most of the people do not go for heart transplant a

a it is very risky.

B.it is very painful.

C. it may cause death of the recipient.

D.the cost is prohibitive

5. Most states refer organ transplant cases to big hospital because

a they don't have well-trained experts

b. the patients don't trust local doctors

C.the state hospitals are very crowded vi.

d. they don't have a pool of harvested organs

6.Hearn retrieved from a body is alive only for hours.

A.TWO

b three

c. four

d. five

vil. What is a green corridor'?

A.The traditional method of transporting organs by mad.

B. A short route cleared and cardoned off by the traffic police

C. A route which stays green to ensure that the harvested organ reaches its destination in the hottest possible

d. All of the above

viii. Why is smooth transportation of the retrieved organ necessary ?

A .So as to move the traffic smoothly.

B. A harvested organ has a short life.

C. As all signals stay green

d. As a specific traffic lane is chosen.

ix. How much does a heart transplant com a patient in a private hospital?

A.₹50,000 to ₹1 lakh

b. ₹15.000 to ₹20 lakhs

c ₹30,000 per month

d. None of

X. Pick out the word from the passage para 1 which mean the same as 'save'.

a. consent

b.onerous

c preserve

d. harvested

xi. Pick out the word from the passage which mean the same as "achieved /carried out".

A. escorting

b.transplanted

C.retrieve

D. Accomplished

Subject: Political Science
Ch-6 Revision assignment Judiciary
Class-11

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1. Define judiciary's role.
2. What do you mean by independence of judiciary?
3. Define judicial activism
4. Who is the present Chief justice of India?
5. What is the retirement age of the Supreme Court and the High Court judge?
6. Define rule of law.
7. Judicial review is adopted from which nation?
8. Name the various writs passed by courts for the protection of fundamental rights.
9. Name the highest judicial authority in India.
10. Name any two controversial judicial appointments.

11. Define judicial review.
12. Who was the first judge against whom impeachment motion was passed?

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SUBJECT – PAINTING (THEORY)

CLASS -XI

Assignment

Q.1**Painting composition**

Make aimagination-composition on any of the subjects in any medium of your choice on a drawing paper of A3 size. Your composition should be original and effective. Weightage will be given to a well composed drawing, effective use of medium, proper emphasis on the subject matter and utilization of full space.

EAST POINT PUBLIC SCHOOL VASUNDHRA ENCLAVE

Class 11

Subject-History

Chapter -11 Paths to Modernization

NCERT Textbook Questions Solved

Q1. What were the major developments before the Meiji restoration that made it possible for Japan to modernise rapidly?

Q 2. Discuss how daily life was transformed as Japan developed?

Q 3. How did the Qing dynasty try and meet the challenge posed by the Western powers?

Q4. What were the Sun Yat-sen's Three Principles?

Very Short Answer Type Questions

Q1. Why did Britain sign the Anglo-Japanese treaty of 1902? What was the importance of this treaty for Japan? (HOTS)

Q2. Who was the President of Chinese Revolutionary League? What were its principles?

Q3. What do you know about Shoguns?

Q 4. What do you know about Comintern?

Q5. How long the Tukugawa rule lasted in Japan?

Q 6. When was Olympic Games organised in Japan?

Q7. What is the meaning of Dim sum?

Q8. What do you know about commodore Matthew Perry?

Q9. What do you know about Meiji Restoration?

Q 10. Write any two military reforms of Meiji era.

Q11. Which two famous commercial companies were set up in Japan during Meiji period?

Q12. When was First Opium War fought? With which treaty did it ends?

Q13. What do you know about Confucianism?

Q14. What do you know about Zaibastu?

Q15. What do you know about Miyake Setsurei?

Q16. Why did America want to colonise Japan? Give two reasons.

Q17. Write any two reforms initiated by America in China.

Q18. Who was Chiang Kai-shek? What did he tell about women?

Q19. Narrate any two changes that came in the daily life of the people of Meiji period.

Q20. What is meant by the slogan 'Fukoku Kyohei'?

Q21. What do you mean by "The Great Leap Forward Movement"?

Q22. How did Japan escape colonisation, according to Nishitam Keiji?

Q23. Write any two ways to depict how China was influenced by Japan.

Q24. When was Hong Kong returned to China by Britain?

Q25. Who is unanimously regarded as the founder of modem China?

Q26. What do you know about Naito Konan?

Q 27. Who spoke these words, "Freedom is more precious than order."?

Q28. Mention the names of two Qing reformers. What sort of contribution did they make to strengthen the Chinese system?

Q29. The movement of May 4 is significant for China. Why?

Long Answer Type Questions

Q1. Discuss the important part of Meiji reform of the economy.

Q2. Japan's transformation into a modem society can also be seen in the changes in everyday life. Comment.

Q3. When was CCP founded? What was Russian influence in its formation? Discuss the role of Mao Zedong in it?

Q4. How did Japan re-emerge as an economic power of world after the defeat in Second World War?

Q5. Discuss the achievements of Deng Xiaoping.

Q6. Discuss the features of the nationalist movement in China during the post-First World War.

Q7. Discuss the causes of the failure of nationalists against the communists.

Q8. Discuss the causes of the decline of the Shoguns.

Passage Based Questions

Read the following passages and answer the questions that follow:

Passage 1.

Fukuzawa Yukichi (1835-1901):

Bom in an impoverished samurai family, he studied in Nagasaki and Osaka learning Dutch and Western sciences and, later, English. In I860, he went as a translator for the first Japanese embassy to the USA. This provided material for a book on the West, written not in the classical but in the spoken style that became extremely popular. He established a school that is today the Keio University. He was one of the core members of the Meirokusha, a society to promote Western learning.

In The Encouragement to Learning (Gakumon no susume, 1872-76) he was very critical of Japanese knowledge: 'All that Japan has to be proud of is its scenery'. He advocated not just modem factories and institutions but the cultural essence of the West-the spirit of civilisation. With this spirit it would be possible to build a new citizen. His principle was: 'Heaven did not create men above men, nor set men below men.'

Questions:

(i) What do you know about Fukuzawa Yukichi?

(ii) What did he advocate?

(iii) Mention the name of the book in which he was critical of Japanese knowledge.

Passage 2.

Tale of the Genji:

A fictionalised diary of the Heian court written by Murasaki Shikibu, the Tale of the Genji became the central work of fiction in Japanese literature. That period saw the emergence of many women writers, like Murasaki, who wrote in the Japanese script, while men wrote in the Chinese script, used for education and government. The novel depicts the romantic life of Prince Genji and is a striking picture of the aristocratic atmosphere of the Heian court. It shows the independence that women had in choosing their husbands and living their lives.

Questions:

(i) What were the different scripts used by various writers?

(ii) What depicts the freedom of women?

(iii) Who wrote a fictionalised diary of the Heian court?

Passage 3.

The Examination System:

Entry to the elite ruling class (about 1.1 million till 1850) had been largely through an examination. This required writing an eight-legged essay [pa-ku wen] in classical Chinese in a prescribed form. The examination was held twice every three years, at different levels and of those allowed to sit only 1-2 per cent passed the first level, usually by the age of 24, to become what was called ‘beautiful talent’. At any given time before 1850 there were about 526,869 civil and 212,330 military provincial (sheng-yuan) degree holders in the whole country. Since there were only 27,000 official positions, many lower-level degree holders did not have jobs. The examination acted as a barrier to the development of science and technology as it demanded only literary skills. In 1905, it was abolished as it was based on skills in classical Chinese learning that had, it was felt, no relevance for the modem world.

Questions:

1. Write any two key features of Chinese examination system.

2. Why was this examination system abolished? Give two reasons.

3. How many civil and military provincial degree holders were in the whole country before 1850?

Map Skills

Q1. On the map of China, mark and locate the main route of Long March.

PSYCHOLOGY

(VERY SHORT QUESTION: 1MARKS)

1. The ……. variable is the behaviour of the person or animal in the experiment.
2. In conducting a survey investigator select a few subjects called a…….... and then makes the decision regarding the more general significance of his findings.
3. Tentative and testable declarative statement which expresses the relation between two or more than two variables……. ….
4. Intelligence, personality, interest, values, creativity, emotions etc. are the example of ……..data.
5. Researcher wants to have high generalizability or to conduct studies which are not possible in laboratory setting he/she may go for the…….
6. Coefficient correlation value ranges from…….
7. In an interview, interviewer has no liberty to make changes in the wordings of the questions or the order. This type of interview is called……..
8. The fact that if two or more researchers administer a psychological test on the same group of people, both of them would come up with more or less the same value is called……
9. …… developed his theory of 'cognitive development' on the basis of observation of his three children.

(SHORT QUESTION: 3 MARKS)

10. A researcher is studying the relationship between speed of cycling and presence of people. formulate a relevant hypothesis and identify the independent and dependent variables
11. Dr. Krishnan is going to observe and record children's play behaviour at a nursery school without attempting to influence or control the behaviour. Which method of research is involved? Explain the processes and discuss its merits and demerits.

(SHORT QUESTION TYPE II: 4 MARKS)

12. What kind of problems can we study in psychological research?
13. What are the various designs the experimental psychologist used while performing a research?
14. How do researchers find out the reliability of a standard test?
15. Psychological research is expected to follow a certain Ethics. Explain those ethics.

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Assignment on Derivatives2

ClASS11

Find the derivatives of

1.$x^2\cos x$

2.$x^2\sin 2x$

3.$x2\sin^2 x$

4.$\frac{x}{tan^2 x}$

5.xcotx+sinx

6.$\frac{x+cosx}{x-sinx}$

7.$\frac{\sqrt{x}}{cos^4 x}$

8.$(ax+bx^2+c)^2$

9.$(\sin x+\cos x)^2$

10.$x^{10}+9x^9+8x^6$

मुंशी प्रेमचंद एवं कबीर दास के जीवन परिचय साहित्यिक विशेषताएं एवं भाषा शैली का वर्णन करते हुए उनकी कुछ रचनाओं के नाम बताइए।
2. कला के प्रति लोगों का नजरिया पहले कैसा था ?उसमें अब क्या बदलाव आया है ?बड़ौदा का बोर्डिंग स्कूल पाठ के आधार पर बताइए।
3.दुकान पर बैठे बैठे भी मकबूल के भीतर का कलाकार उसके किन कार्यकलापों से अभिव्यक्त होता है?

4. प्रचार प्रसार के पुराने तरीकों और वर्तमान तरीकों में क्या फर्क आया है? बड़ौदा का बोर्डिंग स्कूल ,पाठ के आधार पर बताइए।

ReplyForward

CBSE Class 11 Physics

Sample Paper 01 (2020-21)

Maximum Marks: 70

Time Allowed: 3 hours

General Instructions:

i. All questions are compulsory. There are 33 questions in all.
ii. This question paper has five sections: Section A, Section B, Section C, Section D and Section E.
iii. Section A contains ten very short answer questions and four assertion reasoning MCQs of 1 mark each, Section B has two case based questions of 4 marks each, Section C contains nine short answer questions of 2 marks each, Section D contains five short answer questions of 3 marks each and Section E contains three long answer questions of 5 marks each.
iv. There is no overall choice. However internal choice is provided. You have to attempt only one of the choices in such questions.

Section A

1. A lift is accelerated upward. Will the apparent weight of a person inside the lift increase, decrease or remain the same relative to its real weight? What will happen to the apparent weight if the lift moves with uniform speed?
2. Why can speed of a particle not be negative?

OR

Sameer went on his bike from Delhi to Gurgaon at a speed of 60km/hr and came back at a speed of 40km/hr. what is his average speed for entire journey.

3. How is angular momentum related to linear momentum?
4. How is the gravitational force between two point masses affected when they are dipped in water keeping the separation between them the same?

OR

Where does a body weight more; at the surface of the earth or in the mine?

5. Why does not the pressure of atmosphere break windows?
6. $\vec{A}, \vec{B}$ and $\vec{C}$ are three non-collinear, non-co-planar vectors. What can you say about direction of $\vec{A} \times (\vec{B} \times \overline{C})$?
7. Name some physical quantities which are dimensionless.

OR

Why do we have different units for same physical quantity?

8. How do wave Velocity and particle Velocity differ from each other?

OR

The displacement of an elastic wave is given by the function $y = 3\sin\omega t + 4\cos\omega t$ where, y is in cm and t is in second. Calculate the resultant amplitude.

9. If air in a cylinder is suddenly compressed by a piston. What happens to the pressure of air?
10. What is motion in a plane?
11. **Assertion:** During a turn, the value of centripetal force should be less than the limiting frictional force.

    Reason: The centripetal force is provided by the frictional force between the tyres and the road.

    a. Assertion and reason both are correct statements and reason is correct explanation for assertion.
    b. Assertion and reason both are correct statements but reason is not correct explanation for assertion.
    c. Assertion is correct statement but reason is wrong statement.
    d. Assertion is wrong statement but reason is correct statement.
12. **Assertion:** The strain produced in a stretched spring is shearing

    Reason: When spring is stretched, the length of wire of spring increases.

    a. Assertion and reason both are correct statements and reason is correct explanation for assertion.
    b. Assertion and reason both are correct statements but reason is not correct explanation for assertion.
    c. Assertion is correct statement but reason is wrong statement.

d. Assertion is wrong statement but reason is correct statement.

13. **Assertion:** P-T graph of all gases at low density meet at 0 K.

    Reason: Absolute zero kelvin is less than $0^{o}C$ in Celsius scale.

    a. Assertion and reason both are correct statements and reason is correct explanation for assertion.
    b. Assertion and reason both are correct statements but reason is not correct explanation for assertion.
    c. Assertion is correct statement but reason is wrong statement.
    d. Assertion is wrong statement but reason is correct statement.

14. **Assertion:** If two bodies of equal masses undergo elastic collision in one dimension, then after the collision the bodies will exchange their velocities.

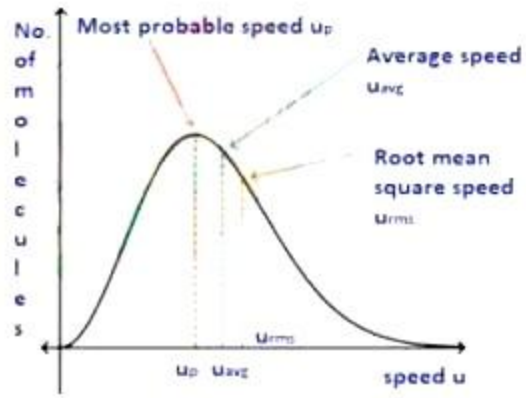
    Reason: In elastic collision, velocity of approach is equal and opposite of velocity of separation.

    a. Assertion and reason both are correct statements and reason is correct explanation for assertion.
    b. Assertion and reason both are correct statements but reason is not correct explanation for assertion.
    c. Assertion is correct statement but reason is wrong statement.
    d. Assertion is wrong statement but reason is correct statement.

Section B

15. **Read the case study given below and answer any four subparts:**

    Root mean square velocity (RMS value)is the square root of the mean of squares of the velocity of individual gas molecules and the Average velocity is the arithmetic mean of the velocities of different molecules of a gas at a given temperature.



i. Moon has no atmosphere because:-

    a. It is far away from the surface of the earth

b. Its surface temperature is 10°C

c. The r.m.s. velocity of all the gas molecules is more than the escape velocity of the moon's surface

d. The escape velocity of the moon's surface is more than the r.m.s velocity of all molecules

ii. For an ideal gas, $\frac{C_P}{C_V}$ is

a. >1

b. <1

c. ≤ 1

d. none of these

iii. The root mean square velocity of hydrogen is $\sqrt{5}$ times than that of nitrogen. If T is the temperature of the gas then:

a. $T(H_2) = T(N_2)$

b. $T(H_2) < T(N_2)$

c. $T(H_2) > T(N_2)$

d. none of these

iv. Suppose the temperature of the gas is tripled and N_2 molecules dissociate into an atom. Then what will be the rms speed of atom:

a. $v_0\sqrt{6}$

b. v_0

c. $v_0\sqrt{3}$

d. none of these

v. The velocities of the molecules are v, 2v, 3v, 4v & 5v. The rms speed will be:

a. 11 v

b. $v(11)^{12}$

c. v

d. $v(12)^{11}$

16. **Read the case study given below and answer any four subparts:**

All three states of matter (solid, liquid and gas) expand when heated. Thermal expansion can be defined as the change in the length, width, height, or volume of any material on changing the temperature. It is a well-known phenomenon now that substances expand on heating and contract on cooling

i. A pendulum clock shows the correct time at a definite temperature. At a higher temperature the clock
   a. loses times
   b. gain time
   c. neither gains nor loses time
   d. none of these

ii. Gaps are left between railway tracks because:
   a. gaps hold the track firmly
   b. gaps give the space to the tracks to expand in the summer
   c. It is customary to leave the gap
   d. none of these

iii. When a copper ball is heated, the largest percentage increase will occur in its:
   a. Diameter
   b. area
   c. volume
   d. all of the above

iv. Expansion during heating:
   a. occurs only in solid
   b. increase the weight of the material
   c. decrease the density of the material
   d. none of these

v. If the length of the cylinder on heating increases by 2 %, the area of the base will increase by:
   a. 2%
   b. 3%
   c. 4%
   d. 5%

Section C

17. If T be the period of a satellite revolving just above the surface of a planet, whose average

density is ρ, show that ρT^2 is a universal constant.

18. An object of mass 0.4kg moving with a velocity of 4m/s collides with another object of mass 0.6kg moving in same direction with a velocity of 2m/s. If the collision is perfectly inelastic, what is the loss of K.E. due to impact?

OR

A boy of mass 40 kg walks up a flight of stairs to a vertical distance of 12 m, in a time interval of 40 s.

i. At what rate is the boy doing work against the force of gravity?
ii. If energy is transformed by the leg muscles of the students at the rate of 30 kJ every minute, what is the students power output?

19. The length of a second's pendulum on the surface of Earth is 1 m. What will be the length of a second's pendulum on the moon?

OR

What are the two basic characteristics of a simple harmonic motion?

20. A bob of mass 0.1 kg hung from the ceiling of a room by a string 2 m long is set into oscillation. The speed of the bob at its mean position is 1 ms^{-1}. What is the trajectory of the bob if the string is cut when the bob is (a) at one of its extreme positions, (b) at its mean position?
21. Starting from a stationary position, a bus attains a velocity of 6 m/s in 30 s. Then, the driver of the bus applies a brake such that the velocity of the bus comes down to 4 m/s in the next 5 s. Calculate the acceleration of the bus in both cases.
22. State important characteristics of a mechanical wave motion.
23. If earth contracts to half its radius what would be the length of the day at equator?
24. Find the value of 60 J per min on a system that has 100 g, 100 cm and 1 min as the base units.

OR

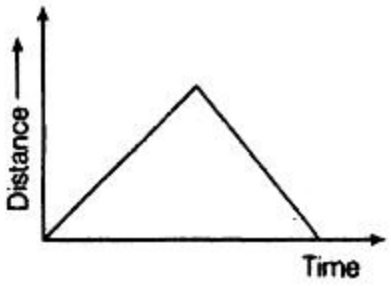
A physical quantity P is related to four observables a, b, c and d as follows:

$$P = \frac{a^3 b^2}{(\sqrt{cd})}$$

The percentage errors of measurement in a, b, c and d are 1%, 3%, 4% and 2%,

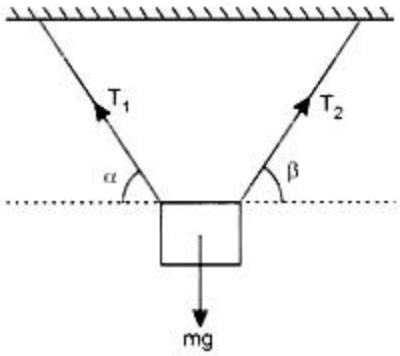
respectively. What is the percentage error in the quantity P? If the value of P calculated using the above relation turns out to be 3.763, to what value should you round off the result?

25. The graph between total path length and time for a particle moving along a straight line as shown in figure is not possible. Explain why?



Section D

26. A body of mass m is suspended by two strings making angles α and β with the horizontal as shown in Figure. Calculate the tensions in the two strings.



27. Which of the following is the most precise device for measuring length:
    a. a vernier callipers with 20 divisions on the sliding scale
    b. a screw gauge of pitch 1 mm and 100 divisions on the circular scale
    c. an optical instrument that can measure length to within a wavelength of light?

OR

One mole of an ideal gas at standard temperature and pressure occupies 22.4 L (molar volume). What is the ratio of molar volume to the atomic volume of one mole of hydrogen? (Take the size of hydrogen molecule to be about $1\overset{o}{A}$). Why is this ratio so large?

28. The range of a rifle bullet is 1000 m, when θ is the angle of projection. If the bullet is fired with the same angle from a car travelling at 36 km/h towards the target, show that the range will be increased by $142.9\sqrt{\tan\theta}$ m.

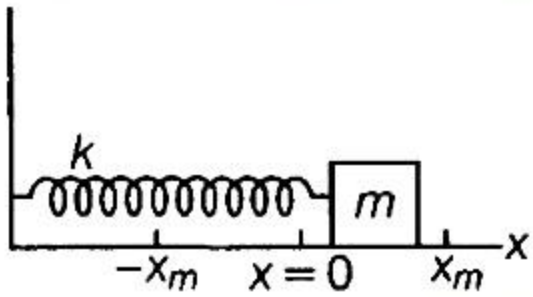
OR

At what point of projectile motion (i) potential energy maximum (ii) Kinetic energy maximum (iii) total mechanical energy is maximum?

29. The density of a solid at 0^0C and 500^0C is in the ratio 1.027 : 1. Find the co-efficient of linear expansion of the solid?
30. Assuming the earth to be a sphere of uniform mass density, how much would body weigh halfway down to the centre of the earth if it weighted 250 N on the surface?

Section E

31. Consider a block of mass 700 g is fastened to a spring having spring constant of 70 N/m. Find out the following parameters if block is pulled a distance of 14 cm from its mean position on a frictionless surface and released from rest at t =0.



i. The angular frequency, the frequency and the period of the resulting motion.
ii. The amplitude of the oscillation.
iii. The maximum speed of the oscillating block.
iv. The maximum acceleration of the block.
v. The phase constant and hence the displacement function x (t).

OR

Find the time period of mass M when displaced from its equilibrium positon and then released for the system shown.

32. An engine is attached to a wagon through a shock absorber of length 1.5 m. The system with a total mass of 50,000 kg is moving with a speed of 36 km/h when the brakes are applied to bring it to rest. In the process of the system being brought to rest, the spring of the shock absorber gets compressed by 1.0 m. If 90% of energy of the wagon is lost due to friction, calculate the spring constant.

OR

A rocket accelerates straight up by ejecting gas downwards. In a small time interval Δt, it ejects a gas of mass Δm at a relative speed u. Calculate KE of the entire system at $(t + \Delta t)$ and t and show that the device that ejects gas does work $= \frac{1}{2}\Delta m u^2$ in this time interval (neglect gravity).

33. A steel rod of length 2 l, cross sectional area A and mass M is set rotating in a horizontal plane about an axis passing through the centre. If Y is the Young's modulus for steel, find the extension in the length of the rod. (Assume the rod is uniform.)

OR

Calculate the percentage increase in the length of a wire of diameter 2.5 mm stretched by a force of 100 kg weight. Young's modulus of elasticity of wire is 12.5×10^{11} dyne/sq cm.

CBSE Class 11 Physics

Sample Paper 01 (2020-21)

Solution

Section A

1. In the first case if 'R', 'mg' and 'ma' are the reaction force or apparent weight, real weight and acting force on the person respectively. Then R - mg = ma $\Rightarrow$ R = m(g + a). Thus the apparent weight will increase.

   Now, If the lift moves with uniform speed upwards or downwards, then a = 0. So, R = mg. So, the apparent weight will remain the same as the real weight.
2. Because speed is distance travelled per second and distance can never be negative.

   OR

   The average speed is given by

   $V_{av} = \frac{2V_1V_2}{V_1+V_2}$

   $V_{av} = \frac{2\times60\times40}{60+40} = \frac{4800}{100}$

   V_{av} = 48 Km/hr
3. $\overline{L} = \overline{r} \times \overline{p}$

   or $L = rp\sin\theta$

   where θ is the angle between $\overline{r}$ and $\overline{p}$, $\overline{r}$ is the position vector of the moving particle with respect to point of reference.

4. The Newton's Universal law of gravitational force of attraction (F) between two bodies of masses m_1, m_2 separated by distance r is $F = \frac{Gm_1m_2}{r^2}$

   G does not depend upon the medium. So force of attraction does not change if the masses are kept in water or any other medium.

   OR

   The value of g in mine is less than that on the surface of the earth. Therefore weight will be more on the surface of earth as compared to the mines.

5. As atmospheric Pressure is exerted on both sides of a window, so there is no pressure difference or net force in any direction. Thus atmospheric pressure does not break the window.
6. The direction of the vector $(\vec{B} \times \overline{C})$ will be perpendicular to the plane containing the vectors $\vec{B}$ and $\vec{C}$ by right-hand thumb or right-hand grip rule (RHGR).
   The direction of the vector $\vec{A} \times (\vec{B} \times \overline{C})$ will be perpendicular to $\vec{A}$ and in a plane containing $\vec{B}$ and $\vec{C}$ by right-hand grip rule.
7. The physical quantities which are dimensionless are Solid angle, relative density, strain, Reynold's number and Poisson's ratio.

OR

The value of a given physical quantity may vary over a wide range. To express the quantity in proper format, we may need different units. Further, a given quantity may be expressed in terms of different quantites, will have same dimensions. This would lead to different equivalent units of the same quantity.

8. Wave velocity is constant for a given medium and is given by W = W. But particle velocity changes harmonically with time and it is maximum at mean position and zero at extreme position.

OR

Comparing the equation in the question with the general equation
$y = y_1 \sin \omega t + y_2 \cos \omega t$
We get the resultant amplitude will be y = $\sqrt{y_1^2 + y_2^2} = \sqrt{9 + 16}$
$= \sqrt{25}$ = 5 cm

9. Since the sudden compression causes heating and rise in temperature and if the piston is maintained at same Position then the pressure falls as temperature decreases.
10. Motion in a plane means motion in a two-dimensional plane which includes x-axis and y-axis.
11. (a) Assertion and reason both are correct statements and reason is correct explanation for assertion.
    Explanation: Both assertion and reason are true and reason is the correct explanation of

assertion.

The body is able to move on a circular path due to centripetal force. The centripetal force in case of vehicle is provided by frictional force. Thus, if the value of frictional force, μ mg is less than centripetal force, then it is not possible fbr a vehicle to take a turn and the bicycle would overturn. Thus, condition for no overturning of vehicle is,

$\mu mg \geq \frac{mv^2}{r}$

12. (c) Assertion is correct statement but reason is wrong statement.

    Explanation: Assertion is correct statement but reason is wrong statement.

13. (b) Assertion and reason both are correct statements but reason is not correct explanation for assertion.

    Explanation: Assertion and reason both are correct statements but reason is not correct explanation for assertion.

14. (b) Assertion and reason both are correct statements but reason is not correct explanation for assertion.

    Explanation: If m_1 - m_2 = m

    Then, from equations

    $v_1' = \frac{(m_1 - m_2)v_1 + 2m_2v_2}{m_1 + m_2}$

    $= \frac{(m-m)v_1 + 2mv_2}{m+m} = v_2$

    Also, from second equation $v_2' = \frac{(m_2 - m_1)v_2 + 2m_1v_1}{m_1 + m_2}$

    $= \frac{(m-m)v_2 + 2mv_1}{m+m} = v_1$

    Therefore, from these equations it is proved that if bodies of equal mass collides then their velocities are exchanged.

Section B

15. i. (c)
    ii. (b)
    iii. (b)
    iv. (a)
    v. (b)
16. i. a
    ii. b
    iii. c

iv. c

v. c

Section C

17. If a satellite revolves in a circular orbit of radius r, then its time period is given by

$T = 2\pi\sqrt{\frac{r^3}{GM}}$

If a satellite is revolving very near the planet's surface, then r = R = radius of planet and M = $\frac{4}{3}\pi R^3\rho$

Hence $\mathrm{T} = 2\pi\sqrt{\frac{R^3}{G.\frac{4}{3}\pi R^3\rho}} = 2\pi\sqrt{\frac{3}{4\pi G\rho}} = \sqrt{\frac{3\pi}{G\rho}}$

$\mathrm{T}^2 = \frac{3\pi}{\mathrm{G}\rho}$ or $\rho\mathrm{T}^2 = \frac{3\pi}{\mathrm{G}}$

But $\frac{3\pi}{Gp}$ is a universal constant. Hence, it is clear that the product $\rho\mathrm{T}^2$ is a universal constant.

18. m_1 = 0.4kg, u_1 = 4m/s, m_2 = 0.6kg u_2 = 2m/s.

Total K.E. before collision

$Ki = \frac{1}{2}m_1u_1^2 + \frac{1}{2}m_2u_2^2$

$K_i = \frac{1}{2}(0.4) \times (4)^2 + \frac{1}{2}(0.6) \times (2)^2$

Ki = 4.4J

Since collision is perfectly inelastic

$v = \frac{m_1u_1+m_2u_2}{m_1+m_2} = 2.8m/s$

Total K.E. after collision

$Kf = \frac{1}{2}(m_1 + m_2)v^2$

$Kf = \frac{1}{2}(0.4 + 0.6) \times (2.8)^2$

Kf = 3.92 J

Loss in K.E. (ΔK) = Ki - Kf = 4.4 - 3.92 = 0.48J

OR

i. Here it is given that given, m =40 kg and t =40 s

Also Energy = 30 kJ, power = ?

Student's output power = ?

Work done by the student against the force of gravity is equal to the gain in gravitational potential energy, so

Work done (W) = mg$\triangle$h

and Rate of doing work i.e, Power = $\frac{\text{Work done}}{\text{Time taken } (\Delta t)}$

$P = \frac{W}{\Delta t} = \frac{40 \times 10 \times 12}{40} = 120\text{W}$

ii. Student's output power can be calculated as:

Power (P) = $\frac{\text{Energy transferred}}{\text{Time taken}}$

P = 30 kJ/min = $\frac{30000\text{J}}{60\text{s}} = 500W$

19. A pendulum of time period (T) of 2 sec is called second pendulum.

$T_e = 2\pi\sqrt{\frac{l_e}{g_e}} \Rightarrow T_e^2 = 4\pi^2 \frac{l_e}{g_e}$ ...(i)

$T_m = 2\pi\sqrt{\frac{l_m}{g_m}} \because g_m = \frac{g_e}{6}$

$\therefore T_m^2 = 4\pi^2 \frac{l_m \times 6}{g_e}$ ...(ii)

For second pendulum $T_e = T_m = 2\,\text{sec}$

$4\pi^2 6 l_m$

$\frac{T_m^2}{T_e^2} = \frac{g_e}{4\pi^2 \frac{l_e}{g_e}}$ or $\frac{(2)^2}{(2)^2} = \frac{6l_m}{l_e}$ $l_e = 1m \frac{1}{1} = \frac{6l_m}{1m} \Rightarrow l_m = \frac{1}{6}m$

OR

Two basic characteristics of a simple harmonic motion are:

i. Acceleration is directly proportional to displacement from mean position, and the direction of acceleration is towards mean position.

ii. Restoring force is directly proportional to displacement, the direction of force and displacement are opposite i.e., $F = -kx$.

20. a. At the extreme position, the velocity of the bob becomes zero. If the string is cut at this moment, then the bob will fall vertically downwards due to force of gravity .

b. At the mean position, the velocity of the bob is 1 m/s(maximum).If the string is cut at the mean position, then it will fall towards the Earth but under combined effect of gravity & horizontal velocity of the bob which is similar to the motion of projectile projected with some initial velocity. Hence, it will follows a parabolic path.

21. **Case I:** In this case Initial velocity of the bus is equal to zero i.e, u = 0

Final velocity, v = 6 m/s and time taken, t = 30 s

We know that, acceleration = $\frac{\text{Change in velocity}}{\text{Time taken}}$

$= \frac{\text{Final velocity} - \text{Initial velocity}}{\text{Time taken}}$

$= \frac{v-u}{t} = \frac{6-0}{30}$ = 0.2 m/s^2

Case II: In this case Initial velocity, u = 6 m/s

Final Velocity = $\frac{v-u}{t} = \frac{4-6}{5}$

= - 0.4 m/s

Hence, the acceleration in both the cases are 0.2 m/s^2 and -0.4 m/s^2 respectively.

22. Important characteristics of mechanical wave motion are as given below :
    i. Wave motion is a form of disturbance which travels from one point to another through a medium.
    ii. The medium particles, through which the disturbance propagates, vibrate to and fro about their mean positions harmonically and suffer no permanent displacement.
    iii. Wave motion is both periodic in space and periodic in time. Hence it is a doubly periodic phenomenon.
    iv. The motion of each particle begins a little later than that of its predecessor. In other words, there is always a constant phase difference between any two neighbouring particles. The wave always advances in that direction in which it meets particles with decreasing phase.
    v. The velocity of the wave is the rate at which the disturbance spreads in the medium. The wave velocity is different from particle velocity.The velocity of a wave is constant in a given medium , whereas the velocity of the particles changes, being maximum in the mean position.
    vi. For wave motion, a medium must be elastic and must possess mass. Moreover, frictional resistance due to the medium should be negligible.
    vii. Waves travels from one medium to another , the wave speed and wavelength change but the frequency remains the same because the frequency is determined by the source.
23. $I_1 = \frac{2}{5}MR^2$

    $\Rightarrow I_2 = \frac{2}{5}M\left(\frac{R}{2}\right)^2 \Rightarrow I_2 = \frac{1}{4}I_1$

    Angular momentum is given by:

    $L = I \times \omega$

    $L = I_1\omega_1 = I_2\omega_2$

    or $l\left(\frac{2\pi}{T_1}\right) = \frac{1}{4}\left(\frac{2\pi}{T_2}\right)$

    or $T_2 = \frac{T_1}{4} = \frac{24}{4} = 6\ hours$
24. We are given that, P = $\frac{60\text{ joule}}{1\text{min}} = \frac{60\text{ joule}}{60\ s}$ = 1 watt

which is the SI unit of power.

Also the dimensional formula of power = $[ML^2T^{-3}]$

SI	New System
$n_1 = 1$	$n_2 = ?$
$M_1 = 1\ kg = 1000\ g$	$M_2 = 10\ g$
$L_1 = 1\ m = 100\ cm$	$L_2 = 100\ cm$
$T_1 = 1\ s$	$T_2 = 1\ min = 60\ s$

Using the formula $n_2 = n_1\left[\frac{M_1}{M_2}\right]^a\left[\frac{L_1}{L_2}\right]^b\left[\frac{T_1}{T_2}\right]^c$, we have

$n_2 = 1\left[\frac{1000}{100}\right]^{-1}\left[\frac{100}{100}\right]^{-2}\left[\frac{1}{60}\right]^{-3}$

$= 2.16 \times 10^6$

Therefore, $60\ J\ min^{-1} = 2.16 \times 10^6$

That is the value of 60 J per minute in new units of power.

OR

Here, $P = \frac{a^3b^2}{(\sqrt{cd})}$

Maximum fractional error in P is given by:

$\frac{\Delta P}{P} = \frac{3\Delta a}{a} + \frac{2\Delta b}{b} + \frac{1}{2}\frac{\Delta c}{c} + \frac{\Delta d}{d}$

$\left(\frac{\Delta P}{P} \times 100\right)\%$

$= \left(3 \times \frac{\Delta a}{a} \times 100 + 2 \times \frac{\Delta b}{b} \times 100 + \frac{1}{2} \times \frac{\Delta c}{c} \times 100 + \frac{\Delta d}{d} \times 100\right)\%$

$= 3 \times 1 + 2 \times 3 + \frac{1}{2} \times 4 + 2$

= 3 + 6 + 2 + 2 = 13%

As the above result (13%error) has two significant figures, therefore, if P turns out to be 3.763, the result would

be rounded off to 3.8.

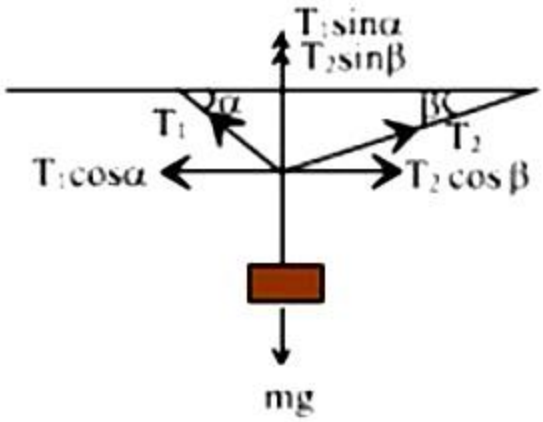
25. From the graph, it is clear that with the passage of time, total path length first increases and then decreases.

The path length of a particle moving along a straight line remains constant or increases

with the passage of time and it does not decrease with time as shown in the figure. Hence, the graph shown in the figure is not possible.

Section D

26. Resolving the tension of two strings i.e. T_1 and T_2 into two rectangular components. See the figure below.



Considering components of tensions T_1 and T_2 along the horizontal and vertical directions, we have

$-T_1 \cos\alpha + T_2 \cos\beta = 0$ or $T_1 \cos\alpha = T_2 \cos\beta$ ..... (i)

and $T_1 \sin\alpha + T_2 \sin\beta = mg$ ..... (ii)

From (i), $T_2 = \frac{T_1 \cos\alpha}{\cos\beta}$

and substituting it in (ii), we obtain

$T_1 \sin\alpha + \left(\frac{T_1 \cos\alpha}{\cos\beta}\right) \sin\beta = mg$

or $T_1 \left[\frac{\sin\alpha\cos\beta + \cos\alpha\sin\beta}{\cos\beta}\right] = mg$

or $T_1 \frac{\sin(\alpha+\beta)}{\cos\beta} = mg$

$\Rightarrow T_1 = \frac{mg\cos\beta}{\sin(\alpha+\beta)}$

and hence $T_2 = \frac{T_1 \cos\alpha}{\cos\beta}$

$= \frac{mg\cos\beta}{\sin(\alpha+\beta)} \cdot \frac{\cos\alpha}{\cos\beta}$

$= \frac{mg\cos\alpha}{\sin(\alpha+\beta)}$

27. The most precise device is that whose least count is minimum.
    a. Least count of vernier calliper

       = 1 standard division (SD) - 1 vernier division (VD)

       1 S D - 19 / 20 S D = 1 / 20 m m = 0.005 c m

b. Least count of screw gauge = $\frac{\text{Pitch}}{\text{No of divisions}}$

$= \frac{1}{100}mm = \frac{1}{1000}cm = 0.001\text{cm}$

c. Least count of an optical device = Wavelength of light $(\lambda) \sim 10^{-5}\text{cm}$

= 0.00001 cm

Hence, it can be inferred that an optical instrument is the most suitable device to measure length.

OR

Radius of one single hydrogen atom, r = 0.5 $\overset{0}{A}$ = 0.5×10^{-10} m (1 $\overset{0}{A}$ = 10^{-10} m)

Volume of one single hydrogen atom $= \frac{4}{3}\pi r^3$

$= \frac{4}{3} \times \frac{22}{7} \times \left(0.5 \times 10^{-10}\right)^3$

$= 0.524 \times 10^{-30}m^3$

Now, 1 mole of hydrogen atoms means 6.023×10^{23} number of hydrogen atoms. (according to Avogadro's hypothesis)

$\therefore$ Atomic volume of 1 mole of hydrogen atoms, V_{H_2} = Avogadro's number $\times$ volume of one single hydrogen atom $= 6.023 \times 10^{23} \times 0.524 \times 10^{-30}\text{m}^3$

$= 3.16 \times 10^{-7}m^3$

Molar volume of 1 mole of hydrogen atoms at STP,

$V_m = 22.4L = 22.4 \times 10^{-3}m^3$ (1 litre = 10^{-3} m^3)

Now, ratio of molar volume of 22.4 L of H_2 to the atomic volume of 1 mole of H_2,

$\therefore \frac{V_m}{V_{H_2}} = \frac{22.4 \times 10^{-3}}{3.16 \times 10^{-7}} = 7.08 \times 10^4$

Hence, the molar volume is 7.08×10^4 times higher than the atomic volume. This ratio is very high due to the fact that the inter-atomic distance is very high as compared to the size of atoms in hydrogen gas.

28. Here it is given, that R = 1000 m

Horizontal range of the bullet fired at an angle θ

$R = \frac{u^2 \sin 2\theta}{g} \Rightarrow 1000 = \frac{u^2 2 \sin\theta\cos\theta}{g}$ .....(i)

Bullet is fired from the car moving with 36 km/h i.e.,10 m/s, then the horizontal component of the velocity of bullet = u sin θ + 10

Vertical component of the velocity of the bullet = u sinθ

Then, new range of the bullet is given by

$R_1 = \frac{2}{g}(u\sin\theta)(u\cos\theta + 10) = \frac{2}{g}u^2\sin\theta\cos\theta + \frac{20}{g}u\sin\theta$

$\Rightarrow R_1 = R + \frac{20}{g}u\sin\theta$

$\Rightarrow R_1 - R = \frac{20}{g}u\sin\theta$.....(ii)

From Eq.(i), we have $u = \sqrt{\frac{1000\times g}{2\sin\theta\cos\theta}}$ .....(iii)

Now, substituting the value of u in Equation (ii), we obtain

$R_1 - R = \frac{20}{g}\sqrt{\frac{1000\times g}{2\sin\theta\cos\theta}}\sin\theta$

$= 20\sqrt{\frac{500\times\sin\theta}{g\cos\theta}}$

$= 20\sqrt{\frac{500}{9.8}\tan\theta}$

$= 142.9\sqrt{\tan\theta}$

Hence proved.

OR

(i) Potential Energy will be maximum at the highest point.

(P.E.) highest point = mgH, where H $\Rightarrow$ maximum height above ground that projectile will attain.

maximum height $H = \frac{u^2\sin^2(\theta)}{2g}$

(P.E.) highest point $mg\left(\frac{u^2\sin^2(\theta)}{2g}\right) = \frac{1}{2}mu^2\sin^2(\theta)$

(ii) K.E will be maximum at the highest point

$(K.E.)_H = \frac{1}{2}m(u_H)^2$

(Vertical component of velocity is zero)

$(K.E.)_H = \frac{1}{2}mu^2\cos^2\theta$

(iii) Total mechanical energy= $(K.E.)_H + (P.E.)_H$

$E = \frac{1}{2}mu^2\cos^2\theta + \frac{1}{2}mu^2\sin^2\theta$

$E = \frac{1}{2}mu^2\left(\cos^2\theta + \sin^2\theta\right)$

$E = \frac{1}{2}mu^2$

29. let $density\ at\ 0^0\ C\ =\ \rho_0$

$density\ at\ 500^0\ C\ =\ \rho_{500}$

As $\rho_0 = \rho_{500}(1 + Y\triangle T)$ ..... (i)

Where, Y = Co-efficient of volume expansion

ΔT = Change in temperature

$\because \frac{\rho_O}{\rho_{500}} = \frac{1.027}{1}$ ..... (ii)

ΔT = rise in temperature = Final Temperature - Initial temperature

ΔT = 500 - 0^0C = 500 ^{0}C

From (i) and (ii) we have $1.027 = 1 \times (1 + Y\Delta T)$

$1.027 = 1 + \gamma\Delta T$

$1.027 - 1 = \gamma\Delta T$

$0.027 = \gamma\Delta T$

$\gamma = \frac{0.027}{500}$

$\gamma = 54 \times \left|10^{-6}\right|^0 C$

Now, Co-efficient of linear expansion (α) and co-efficient of volume expansion (γ) are related as:-

$\alpha = \frac{\gamma}{3}$

$\alpha = \frac{54 \times 10^{-6}}{3}$

$\alpha = 18 \times 10^{-6}\Big|^0 C$

30. Weight of the body at the earth's surface

$w = mg = 250N$.....(i)

Acceleration due to gravity at depth d from the earth's surface

$g' = g\left(1 - \frac{d}{R}\right)$

here, $d = \frac{R}{2}$

$\therefore g' = g\left(1 - \frac{R/2}{R}\right)$ = g $\left(1 - \frac{1}{2}\right)$

$\Rightarrow g' = \frac{g}{2}$

$\therefore$ The weight of the body at depth d

$\Rightarrow w' = mg' = \frac{mg}{2}$

Using Eq. (i) we get

$w' = \frac{250}{2} = 125N$

$\therefore$ Weight of the body will be $125N$.

Section E

31. i. The angular frequency is given by

$\omega = \sqrt{\frac{k}{m}} = \sqrt{\frac{70\text{N/m}}{0.700\text{kg}}}$ = 10 rad/s

Frequency, $f = \frac{\omega}{2\pi} = \frac{10}{2\pi} \simeq 1.59\text{Hz}$

The time period, T = $\frac{1}{f} = \frac{1}{1.59}$ = 0.63 = 630 ms

ii. The maximum amplitude of the oscillation = maximum displacement

$\therefore x_m = 14$ cm $= 0.14$ m

iii. The maximum speed of the oscillation v_m is given by

$v_m = \omega x_m = 10 \times 0.14 = 1.4$ m/s

iv. The magnitude of maximum acceleration of the block is given by

$a_m = \omega^2 x_m = 100 \times 0.14 = 14$ m/s^2

At time t = 0, the block is located at position, $x = x_m$

v. Then, from general equation of oscillation, $x(t) = x_m \cos(\omega t + \phi)$

$\Rightarrow x_m = x_m \cos(0 \times \omega + \phi)$

$\therefore \cos\phi = 1 \Rightarrow \phi = 0$

The required displacement function of the given oscillation with all the above values becomes,

$x(t) = x_m \cos(\omega t + \phi)$

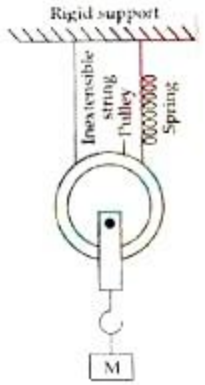
$\Rightarrow x(t) = 0.14 \times \cos(10t + 0)$

$\Rightarrow x(t) = 0.14 \cos 10t$

OR

When mass M is pulled and released then mass M oscillates up and down along with pulley

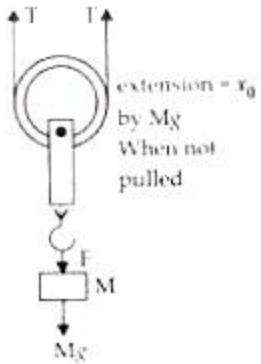
Let the spring extends by x_0 when loaded by mass M. The extension and compression of spring from initial position is larger and smaller respectively due to acceleration due to gravity by same amount of forces always. So effect of gravitational force can be neglected.



Now let the mass 'M' is pulled by force 'F' downward by displacement x. Then extension in spring will be $2x$ as string can not be extended.

So, total extension in spring $= (x_0 + 2x)$

$T' = k(x_0 + 2x)$ (when pulled downward by x)



$T = kx_0$ (when no pulling)

$F = 2T$

$F = 2kx_0$

And,

$F' = 2T'$

$\rightarrow F' = 2k(x_0 + 2x)$

Restoring force

$\rightarrow F_{rest} = -(F' - F)$

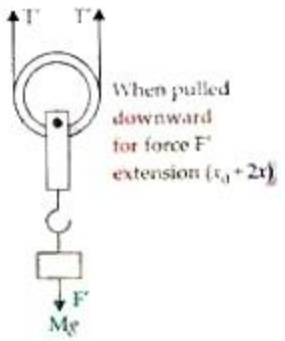
$\rightarrow f_{rest} = -[2k(x_0 + 2x) - 2kx_0)]$

$\rightarrow F_{rest} = -2k.2x$

$\rightarrow Ma = -4kx$

$a \propto -x$

$\rightarrow$ Hence, the motion is simple harmonic motion(SHM).



$\rightarrow a = -\omega^2 x$

$\therefore \omega^2 = \frac{-a}{x} = \frac{+4k}{M}$

$\omega = 2\sqrt{\frac{k}{M}}$

$\Rightarrow \frac{2\pi}{T} = 2\sqrt{\frac{k}{M}}$

$T = \pi\sqrt{\frac{M}{k}}$.

$\rightarrow$Therefore, Time period is given by relation $\rightarrow T = \pi\sqrt{\frac{\mathrm{M}}{\mathrm{k}}}$

32. According to the question , mass of the engine , m = 50,000 Kg

velocity of the engine $v = 36km/h = 10m/s$

$K.E. = \frac{1}{2}mv^2$

$KE = \frac{1}{2} \times 50,000 \times 10 \times 10 = 2500000J$

According to 90% of Kinetic Energy of wagon lost due to friction by breaks so only 10% are passed to spring.

Kinetic Energy of the spring = 10% of Kinetic Energy of the wagon

$\frac{1}{2}kx^2 = \frac{10}{100} \times 2500000$

K = 500000 N/M

= 5 $\times 10^5$ N/m.

OR

Let mass of rocket at any time t = M

Velocity of rocket at any time t = v

Δm is the mass of gas ejected in time interval Δt

$(KE)_{z+\Delta t} = \frac{1}{2}(M - \Delta m)(v + \Delta v)^2 + \frac{1}{2}\Delta m(v - u)^2$

$= \frac{1}{2}\left[(M - \Delta m)\left(v^2 + \Delta v^2 + 2v\Delta v\right) + \Delta m\left(v^2 + u^2 - 2uv\right)\right]$

$$(KE)_{\tau+\Delta t} = \frac{1}{2}\begin{bmatrix} Mv^2 + M\Delta v^2 + 2Mv\Delta v - \Delta mv^2 \\ -\Delta m\Delta v^2 - 2v\Delta m\Delta v + \Delta mv^2 + \\ \Delta mu^2 - 2uv\Delta m \end{bmatrix}$$

$(KE)_{t+\Delta t} = \frac{1}{2}Mv^2 + Mv\Delta v + \frac{1}{2}\Delta mu^2 - uv\Delta m$

[neglecting the very small terms $M\Delta v^2, \Delta m\Delta v^2, 2v\Delta m\Delta v$contains Δv^2 and $\Delta m\Delta v$]

$(KE)_\tau = \frac{1}{2}Mv^2$

$(KE)_{t+\Delta t} - (KE)_t = \frac{1}{2}Mv^2 + Mv\Delta v + \frac{1}{2}\Delta mu^2 - uv\Delta m - \frac{1}{2}Mv^2$

$\Delta K = \frac{1}{2}\Delta mu^2 + v\left(M\Delta v - u\Delta m\right)$

By Newton's third law,

Reaction force on Rocket (upward) = Action force by burnt gases (downward)

$M\frac{dv}{dt} = \frac{dm}{dt}|u|(\because F = ma)$

Or $M\Delta v = \Delta mu \Rightarrow M\Delta v - u\Delta m = 0$

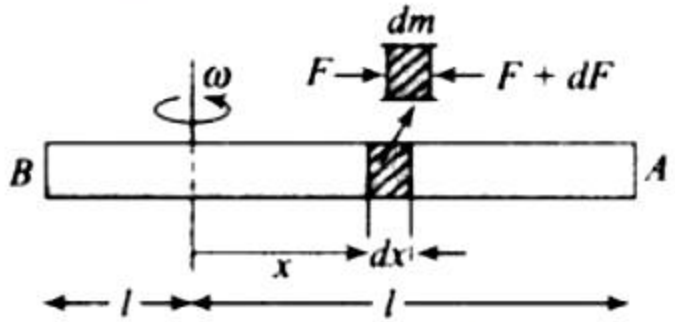
Substitute this value in (i)

$K = \frac{1}{2}u^2\Delta m$

By work energy theorem $\Delta(KE) = WD$

Or $W = \Delta K = \frac{1}{2}\Delta m u^2$.

33. Consider an element of width dx at a distance x from the given axis of rotation as shown in the figure:



As rod is uniform, so mass per unit length, $\mu = \frac{M}{2l}$

Mass of small element dm = $\left(\frac{M}{2l}\right)dx$

Centripetal force acting on this element,

dF = dm.xω^2

$\Rightarrow \quad dF = \left(\frac{M}{2l}\right)dx \cdot x\omega^2$

Let tension in the rod be F at a distance x from the axis of rotation. F is due to centripetal force acting on all the elements from x to l, i.e.

$F = \frac{M\omega^2}{2l}\int_x^l x dx = \frac{M\omega^2}{4l}\left(l^2 - x^2\right)$

If d(r) is the extension in the element of length dx at position x, then,

$d(r) = \frac{Fdx}{YA}\left[\because Y = \frac{F/A}{d(r)/dx}\right]$ where Y is Young's Modulus.

Hence, extension in the half on the rod (from axis to point A) is given by

$\Delta r = \int_0^l d(r) = \int_0^l \frac{Fdx}{YA}$

$= \frac{M\omega^2}{4YAl}\left[l^2(x) - \frac{x^3}{3}\right]_0^l = \frac{M\omega^2}{4YAl}\left[l^3 - \frac{l^3}{3}\right] = \frac{M\omega^2 l^2}{6YA} = \frac{\mu\omega^2 l^3}{3YA}$ (putting M = 2μl)

Hence, total extension in whole rod of length 2l = 2$\triangle$r = $\frac{2}{3YA}\mu\omega^2 l^3$

OR

Here' $2r = 2.5mm = 0.25cm$

or $r = 0.125cm$

$\therefore$ a = πr^2 = $\frac{22}{7} \times (0.125)^2 sq.cm$

$F = 100kg = 100 \times 1000g$

$p = 10 \times 1000 \times 980\ dyne$

$Y = 12.5 \times 10^{11}\ dyne/sq.cm$

As Y = $\frac{F \times l}{a \times \Delta l}$

$\therefore \frac{\Delta l}{l} = \frac{F}{aY}$

Hence, % increase in length

= $\frac{\Delta l}{l} \times 100 = \frac{F}{aY} \times 100$

= $\frac{(100 \times 1000 \times 980) \times 7 \times 100}{22 \times (0.125)^2 \times 12.5 \times 10^{11}}$

= 0.1812 %

Cl 11 geography assignments

Revision assignment

1. Which two processes are responsible for the changing of the configuration of the Earth?
2. What is the radius of the Earth?
3. Mention the direct sources of the information of the interior Earth?
4. Which two projects are working on the study of interior of the Earth
5. Describe the indirect source of the interior Earth.
6. How does earthquake could be measured?
7. Why does earth shake?
8. Distinguish between hypocentre and epicentre.
9. List out the types of earthquake waves.

CLASS-XI **CHAPTER –RANGA'S MARRAIGE** **SUBJECT: ENGLISH**

1. what is the name of the doctor and why the narrator mentioned his name?
2. The city of Hosahalli is compared to ----------
3. After how many months Ranga returned from Bangalore?
4. what is Janeewara?
5. What is the name of the narrator's village?
6 Why the readers do not know about the place?
7. What does the narrator mention as a priceless commodity?
8. Who is Ranga?
9. What does the narrator feel he could call his narration instead of Ranga's marriage?
10. What does the writer say about the Indians aping (imitating) the west?
11. Why were the people of the village curious to see Ranga?
12. What example the writer give in order to prove that English words have become a part of our ever day vocabulary?
13.. Where does Ranga go to for his studies? Whose son was he?
14.What is Hosahalli? What does the narrator has to say about it in the story?
15. What are the two special productions of Hosahalli?
16.. What incident occurred when Ranga returned to his village from Bangalore?
17. What happened ten years ago? How was it important back then?
18. How the narrator gives us a vague picture of Indian villages during British rule?
19. what is the name of the author?

XIC -24/9/2020

1. How is the situation of the village ten years before?
2. How is the accountant different from other villagers?
3. What is the name of the accountant?
4. What is the situation of the village after ten years?
5. Give evidence from story to show that the people are able to speak English after ten years?
6. Why the narrator felt disgraceful?
7. What is the English word that the woman can't understand?
8. Why the woman started to mutter?
9. From whom the narrator came to know the meaning of change?
10 How much is to be paid for the firewood?

15. what is the name of the doctor and why the narrator mentioned his name?
16. The city of Hosahalli is compared to ----------
17. After how many months Ranga returned from Bangalore?
18. what is Janeewara?
19. What is the name of the narrator's village?
20 Why the readers do not know about the place?
21. What does the narrator mention as a priceless commodity?
22. Who is Ranga?
23. An old lady checked for Ranga's _____
24. The dispersal of the crowd from the house is describe as_____
25. After knowing that Ranga was the same the crowd are_____
26. The writing style of the narrator is _____
27. The narrator blessed Ranga with the words_____
28. The namaskara made by Ranga shows that he is _____
29. What Ranga took with him when he went to meet the narrator?
30. When the narrator came to know the speciality of the fruit?

XIB -21/9/20

1. What is the question asked by narrator when Ranga came to his home?
2. With what name narrator address to Ranga?
3. What is the reply of Ranga for narrator's question?
4. According to Ranga how can a couple lead a happy life?
5, What is the name of the play that is mentioned by Ranga and who wrote it ?
6. Who are the characters in the play?
7. What type of girl is Ranga willing to get married?
8. According to Ranga when a man should remain as a bachelor?
9. Why Ranga is not interested to marry a young girl?
10. What is the reason for Ranga not interested in marriage?

22/9/2020 XIB

1. What were Ranga's views on the selection of bride and marriage in general?
2. What is the phrase used by the narrator about the young girl getting married?
3. Why was the narrator distressed after meeting Ranga?
4. What the narrator strongly decided to do ?
5. Who is the niece of Rama rao?
6. what is the age of the girl?
7. To which place she belong to?
8. What she knew to play?
9. Why her uncle brought her home?
10. Whom the narrator felt is the best bride for Ranga?
11. Who was Ratna?
12. What the narrator would give to Ratna?
13. What is threshold?
14. What the narrator ask Ratna to do?
15. When Ratna came to the house of the narrator?
16. To whom the narrator made a call while Ratna was at his home?
17. What Ranga heard when he is entering the narrator's house?
18. What Ranga is curious to know?
19. Why Ranga was not able to see the singer?
20. On seeing a stranger what Ratna do?
21. Describe the comparison made by narrator for Ranga's disappointment?
22. Who glanced at whom?
23. How did the narrator bring Ranga and Ratna face to face?
24. Why did the narrator resolve to get Ranga married?

XIC -24/9/2020

1. How is the situation of the village ten years before?

2. How is the accountant different from other villagers?
3. What is the name of the accountant?
4. What is the situation of the village after ten years?
5. Give evidence from story to show that the people are able to speak English after ten years?
6. Why the narrator felt disgraceful?
7. What is the English word that the woman can't understand?
8. Why the woman started to mutter?
9. From whom the narrator came to know the meaning of change?
10 How much is to be paid for the firewood?

XIB – 24/9/2020

1. Why Ranga want to leave the place?

2. Did Ranga really intend to leave the place?

3. What one cannot expect in kaliyuga?

4. Who is he goat referred to ?

5. What Ranga asked to swami?

6. The narrator compares the situation to what?

7. What is the reply of narrator for Ranga's question of knowing the name of the girl?

8. Why Ranga is interested to know whether the girl is married or not?

9. What is the reaction of Ranga after knowing that the girl was married a year ago?

10. What is Ranga's disappointment is compared to?

XIC 25/9/2020

1. What does the narrator mention as a priceless commodity?

2. Why were the people of the village curious to see Ranga?

3. What was the situation at Ranga's house when he returned from Banglore?

4. Where the people gathered at Ranga's house?

5. Who got attracted seeing the crowd?

6. What is the comment made by narrator after seeing the crowd?

7. What is the comment made by the immature boy to the narrator?

8. What is compared to the Black Hole of Calcutta and why?

9. What is Janewara?

10. How the old lady confirmed herself that Ranga has not changed?

XIB 25/9/2020

1. Who went to shastri and what he say to him?

2. Who found Ranga is still disappointed?

3. What is the reason the narrator predicting for Ranga's present situation?

4. Why the narrator want to see Shastri along with Ranga?

5. What is the name of the narrator?

6. Why the narrator got angry with shastri?

7. How Shastri covered the mistake of the narrator?

8.What the narrator compared his mistaked to?

9. What the narrator asked Shastri in behalf of Ranga?

10. Why does the narrator compare himself to a he-goat and Ranga to a lion?

26/9/2020 XIB

1. According to Shastri what is the reason for Ranga's worry?

2. Who is the humble servant in the story?

3. What are the possible names of the girl that Shastri predicted?

4. Why Ranga felt happy at Shastri's house?

5. What tricks did the narrator plan to intensify Ranga's interest in Ratna?

6. What role did Shastri play in bringing about Ranga and Ratna together?

7. How did Ranga and Ratna express their gratitude to the narrator?

8. Why did the narrator tell a lie about Rangs's marital status?

9. Did Ranga select his bride according to the views he had on the subject of marriage?

10. What arrangements did the narrator make with Shastri the astrologer?

11. How did the narrator resolve to get Ranga married to Ratna?

12. What were Ranga's ideas about marriage?Do you find any change in them at the end of the story . How?

XIC 26/9/2020

1. How the narrator addressed Ranga?
2.How Ranga behaved with the narrator at the first meet?
3. What impression the narrator framed of RANGA at his first meet?
4. How the namaskar of Ranga is different from the present day boys?
5. What is the question asked by narrator when Ranga came to his home?
6. With what name narrator address to Ranga?
7. What is the reply of Ranga for narrator's question?
8. According to Ranga how can a couple lead a happy life?
9, What is the name of the play that is mentioned by Ranga and who wrote it ?
10. Who are the characters in the play?
11. What type of girl is Ranga willing to get married?
12. According to Ranga when a man should remain as a bachelor?
13. Why Ranga is not interested to marry a young girl?
14. What is the reason for Ranga not interested in marriage?
15. What Ranga took with him when he went to meet the narrator?

XIC 28/9/2020

1. What were Ranga's views on the selection of bride and marriage in general?
2. What is the phrase used by the narrator about the young girl getting married?
3. Why was the narrator distressed after meeting Ranga?
4. What the narrator strongly decided to do ?
5. Who is the niece of Rama rao?
6. what is the age of the girl?
7. To which place she belong to?
8. What she knew to play?
9. Why her uncle brought her home?
10. Whom the narrator felt is the best bride for Ranga?
11. Who was Ratna?
12. What the narrator would give to Ratna?
13. What is threshold?
14. What the narrator ask Ratna to do?
15. When Ratna came to the house of the narrator?
16. To whom the narrator made a call while Ratna was at his home?
17. What Ranga heard when he is entering the narrator's house?
18. What Ranga is curious to know?
19. Why Ranga was not able to see the singer?
20. On seeing a stranger what Ratna do?
21. Describe the comparison made by narrator for Ranga's disappointment?
22. How did the narrator bring Ranga and Ratna face to face?

30/9/20 XIC

1. Why Ranga want to leave the place?
2. Did Ranga really intend to leave the place?
3. What one cannot expect in kaliyuga?
4. Who is he goat referred to ?
5. What Ranga asked to swami?
6. The narrator compares the situation to what?
7. What is the reply of narrator for Ranga's question of knowing the name of the girl?
8. Why Ranga is interested to know whether the girl is married or not?
9. What is the reaction of Ranga after knowing that the girl was married a year ago?
10. What is Ranga's disappointment is compared to?

11. Who went to shastri and what he say to him?
12. Who found Ranga is still disappointed?

13. What is the reason the narrator predicting for Ranga's present situation?

14. Why the narrator want to see Shastri along with Ranga?

15. What is the name of the narrator?

16. Why the narrator got angry with shastri?

17. How Shastri covered the mistake of the narrator?

18.What the narrator compared his mistaked to?

19. What the narrator asked Shastri in behalf of Ranga?

20. Why does the narrator compare himself to a he-goat and Ranga to a lion?

XIB 30/92020

1. What are the two distinct features of the village of Hosahalli?

2. What role does the narrator play in the life of Ranga?

3.What tricks did the narrator play tointensify Ranga's interest in Ratna?

4.Why did the narrator resolve to get Ranga married?

5. What role does Shastri play in bringing about Ranga and Ratna together?

6. How did Ranga and Ratna express their gratitude to the narrator?

7. Did Ranga select his bride according to the views held on the subject of marriage?

8. What example does the writer give in order to prove that the English words has become a part of our everyday vocabulary?

9.What was the narrator's need to rope in Shastri in to his plan?

10. What made Shastri unhappy?

Assignment on Permutation2

Class 11

1.Find n if ${}^{n}P_{4}$:${}^{n}P_{5}$ =1:2

2.Find n if P(n,4) =2 P(5,3)

3.FIND r IF P(10 ,r+1) :P(11,r) =30 :11

4.If ${}^{2n+1}P_{n-1}$: ${}^{2n-1}P_{n}$ =3:5 Find n

5.Ten students participate in a debate.In how many ways can the first three prizes won?

6.In how many ways can 4 books on mathematics and 3 books on English be placed on a shelf so that books on the same subject always remain together?

7.In how many ways 5 boys and 3 girls can be seated in a row so that no two girls are together?

8.A tea party is arranged for 16 persons along two sides of a long table with 8 chairs on each side.Four persons wish to sit on one particular side and two onother side.In how many ways can they be seated?

9.Find the number of permutations of the letters of the word HYDERABAD.

10.The letters of the word ‘RANDOM’ are written in all possible orders and the words are written as in a dictionary>Find the rank of the word ‘RANDOM’.

Assignment/Worksheet Class 11th Python

Using the Python interpreter In our first code we are going to print "Hello World!" using the interpreter. To generate the output, type the following: >>> print("Hello World!") Hello World!

Variables and Assignment: In algebra, variables represent numbers. The same is true in Python, except Python variables also can represent values other than numbers.

Identifiers: While mathematicians are content with giving their variables one-letter names like x, programmers should

use longer, more descriptive variable names. Names such as sum, height, and sub_total are much better than the equally permissible s, h, and st. A variable's name should be related to its purpose within the program. Good variable names make programs more readable by humans. Since programs often contain many variables, well-chosen variable names can render an otherwise obscure collection of symbols more understandable. Identifiers have the

1. following form:
   - Identifiers must contain at least one character.
   - The first character must be an alphabetic letter (upper or lower case) or the underscore

   ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz_
2. The remaining characters (if any) may be alphabetic characters (upper or lower case), the underscore, or a digit

   ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz_0123456789
   - No other characters (including spaces) are permitted in identifiers.
   - A reserved word cannot be used as an identifier (see Table 2.1).
3. Here are some examples of valid and invalid identifiers:
4. All of the following words are valid identifiers and so can be used as variable names: x, x2, total,port_22, and FLAG.
   - None of the following words are valid identifiers: sub-total (dash is not a legal symbol in an
5. identifier), first entry (space is not a legal symbol in an identifier), 4all (begins with a digit), #2(pound sign is not a legal symbol in an identifier), and class (class is a reserved word).

Keywords and Identifiers: The following identifiers are used as reserved words, or keywords of the language, and cannot be used as ordinary

identifiers. They must be typed exactly as written here:

```
False      class      finally    is         return
None       continue   for        lambda     try
True       def        from       nonlocal   while
and        del        global     not        with
as         elif       if         or         yield
assert     else       import     pass
break      except     in         raise
```

Reading input from the Keyboard input("String to show") // number = int(input("Enter an integer: "))

The eval Function : The input function produces a string from the user's keyboard input. If we wish to treat that input as a number, we can use the int or float function to make the necessary conversion:

```
x = float(input('Please enter a number'))
```

Operators: Operators are the symbols which tells the Python interpreter to do some mathematical or logical operation. Few basic examples of mathematical operators are given below:

>>> 2 + 3 5 >>> 23 – 3 20

Expressions: Generally while writing expressions we put spaces before and after every operator so that the code becomes clearer to: read, like a = 234 * (45 - 56.0 / 34)

Identifiers/variables -Names given to any variable, function, class, union etc. Naming convention(rule) for writing identifier is as under:

1. Names of functions 2. Names of arrays 3. Names of variables 4. Names of classes

i) First letter of identifier is always alphabet.

ii) Reserve word cannot be taken as identifier name.

iii) No special character in the name of identifier except under score sign '_'.

Here are some examples of acceptable identifiers:

1.	mohd	**5.**	a_123	**9.**	J	**12.**	**abc_rr**
2.	zara	**6.**	mynam	**10.**	a23b9		
3.	abc	**7.**	e50	**11.**	retVal		
4.	move_na	**8.**	_temp				

Some Facts About Identifier :

1. It is name given to program element.
2. Identifier is the names are given by the programmer.
3. We can give any valid name to the identifier.
4. Keywords cannot be used as Identifier.
5. Only Alphabets, Digits and Underscores are permitted.
6. Identifier name cannot start with a digit.
7. Key words cannot be used as a name.
8. Upper case and lower case letters are distinct.
9. Special Characters are not allowed
10. Global Identifier cannot be used as "Identifier".
11. An identifier is used for any variable, function, data definition etc.
12. Other special characters are not allowed for naming a variable / identifier
13. PYTHON is case-sensitive so that Uppercase Letters and Lower Case letters are different
14. The name of identifier cannot begin with a digit. However, Underscore can be used as first character while declaring the identifier.
15. Only alphabetic characters, digits and underscore (_) are permitted in PYTHON language for declaring identifier.

Q1. Classify each of the following as either a legal or illegal Python identifier:

1.	fred	#Keywords	8.	#sum total	#Invalid	15.	xTwo	#identifier
2.	#if	# Invalid	9.	Sumtotal	#identifier	16.	_static	#identifier
3.	#2x	#Invalid	10.	While	#identifier	17.	_4	#identifier
4.	-4	#Constant	11.	x2	#identifier	18.	___	#identifier
5.	sum_total	#identifier	12.	Private	#Keywords	19.	#10%	#Invalid
6.	sumTotal	#identifier	13.	public	#Keywords	20.	a27834	#identifier
7.	sum-total	#Expression	14.	#$16	#Invalid	21.	#wilma's	#Invalid

Q2. If x = 2 Indicate what each of the following Python statements would print.

print("x")	1. x
print('x')	2. x
print(x)	3. 2
print("x + 1")	4. x + 1
print('x' + 1)	5. #Invalid
print(x + 1)	6. 3

Q3. Find Output: if *i1 = 2,i2 = 5,i3 = -3,d1 = 2.0,d2 = 5.0,d3 = -0.5;*

1. i1 + i2	1. print(i1 + i2)	1. 7
2. i1 / i2	2. print(i1 / i2)	2. 0.4
3. i1 // i2	3. print(i1 // i2)	3. 0
4. i2 / i1	4. print(i2 / i1)	4. 2.5
5. i2 // i1	5. print(i2 // i1)	5. 2
6. i1 * i3	6. print(i1 * i3)	6. -6
7. d1 + d2	7. print(d1 + d2)	7. 7.0
8. d1 / d2	8. print(d1 / d2)	8. 0.4
9. d2 / d1	9. print(d2 / d1)	9. 2.5
10. d3 * d1	10. print(d3 * d1)	10. -1.0
11. d1 + i2	11. print(d1 + i2)	11. 7.0
12. i1 / d2	12. print(i1 / d2)	12. 0.4
13. d2 / i1	13. print(d2 / i1)	13. 2.5
14. i2 / d1	14. print(i2 / d1)	14. 2.5
15. i1/i2*d1	15. print(i1/i2*d1)	15. 0.8
16. d1*i1/i2	16. print(d1*i1/i2)	16. 0.8
17. d1/d2*i1	17. print(d1/d2*i1)	17. 0.8
18. i1*d1/d2	18. print(i1*d1/d2)	18. 0.8
19. i2/i1*d1	19. print(i2/i1*d1)	19. 5.0
20. d1*i2/i1	20. print(d1*i2/i1)	20. 5.0
21. d2/d1*i1	21. print(d2/d1*i1)	21. 5.0
22. i1*d2/d1	22. print(i1*d2/d1)	22. 5.0

Q4. Find Output: if i2 = 5,i3 = -3,1 = 2.0,d2 = 5.0,d3 = -0.5

1. i1 + (i2 * i3)	1. print(i1 + (i2 * i3))	1. -13
2. i1 * (i2 + i3)	2. print(i1 * (i2 + i3))	2. 4
3. i1 / (i2 + i3)	3. print(i1 / (i2 + i3))	3. 1.0
4. i1 // (i2 + i3)	4. print(i1 // (i2 + i3))	4. 1
5. i1 / i2 + i3	5. print(i1 / i2 + i3))	5. -2.6
6. i1 // i2 + i3	6. print(i1 // i2 + i3)	6. -3
7. 3 + 4 + 5 / 3	7. print(3 + 4 + 5 / 3)	7. 8.666666666666666
8. 3 + 4 + 5 // 3	8. print(3 + 4 + 5 // 3)	8. 8
9. (3 + 4 + 5) / 3	9. print((3 + 4 + 5) / 3)	9. 4.0
10. (3 + 4 + 5) // 3	10. print((3 + 4 + 5) // 3)	10. 4
11. d1 + (d2 * d3)	11. print(d1 + (d2 * d3))	11. -0.5
12. d1 + d2 * d3	12. print(d1 + d2 * d3)	12. -0.5
13. d1 / d2 - d3	13. print(d1 / d2 - d3)	13. 0.9
14. d1 / (d2 - d3)	14. print(d1 / (d2 - d3))	14. 0.36363636363636365
15. d1 + d2 + d3 / 3	15. print(d1 + d2 + d3 / 3)	15. 6.833333333333333
16. (d1 + d2 + d3) / 3	16. print((d1 + d2 + d3) / 3)	16. 2.1666666666666665
17. d1 + d2 + (d3 / 3)	17. print(d1 + d2 + (d3 / 3))	17. 6.833333333333333
18. 3 * (d1 + d2) * (d1 - d3)	18. print(3 * (d1 + d2) * (d1 - d3))	18. 52.5

Q5. Write the shortest way to express each of the following statements.

1. x = x + 1	X+=1
2. x = x / 2	x/=2
3. x = x - 1	x-=1
4. x = x + y	x+=y
5. x = x - (y + 7)	x-=y+7

6. x = 2*x	x*=2
Q6. Program with Output:	
pi = 3.14159; print("Pi =", pi) print("or", 3.14, "for short") avogadros_number = 6.022e23 c = 2.998e8 print("Avogadro's number =", avogadros_number) print("Speed of light =", c)	Pi = 3.14159 or 3.14 for short Avogadro's number = 6.022e+23 Speed of light = 299800000.0
print('A\nB\nC') print('D\tE\tF') print('WX\bYZ') print('1\a2\a3\a4\a5\a6')	A B C D E F W X Y Z 1 2 3 4 5 6
print("Did you know that 'word' is a word?") print('Did you know that "word" is a word?') print('Did you know that \'word\' is a word?') print("Did you know that \"word\" is a word?")	Did you know that 'word' is a word? Did you know that "word" is a word? Did you know that 'word' is a word? Did you know that "word" is a word?
filename = 'C:\\Users\\rick' print(filename)	C:\Users\rick Please enter some text:
print('Please enter some text:') x = input() print('Text entered:', x) print('Type:', type(x))	Hi Mr Ravi Text entered: Hi Mr Ravi Type: <class 'str'>
print('Please enter an integer value:') x = input() print('Please enter another integer value:') y = input() num1 = int(x) num2 = int(y) print(num1, '+', num2, '=', num1 + num2)	Please enter an integer value: 91 Please enter another integer value: 32 91 + 32 = 123
x = input('Please enter an integer value: ') y = input('Please enter another integer value: ') num1 = int(x) num2 = int(y) print(num1, '+', num2, '=', num1 + num2)	Please enter an integer value: 23 Please enter another integer value: 43 23 + 43 = 66
num1 = int(input('Please enter an integer value: ')) num2 = int(input('Please enter another integer value: ')) print(num1, '+', num2, '=', num1 + num2)	Please enter an integer value: 12 Please enter another integer value: 45 12 + 45 = 57
x1 = eval(input('Entry x1? ')) print('x1 =', x1, ' type:', type(x1)) x2 = eval(input('Entry x2? ')) print('x2 =', x2, ' type:', type(x2)) x3 = eval(input('Entry x3? ')) print('x3 =', x3, ' type:', type(x3)) x4 = eval(input('Entry x4? '))	Entry x1? 12 x1 = 12 type: <class 'int'> Entry x2? 21 x2 = 21 type: <class 'int'> Entry x3? 122 x3 = 122 type: <class 'int'> Entry x4? 43

print('x4 =', x4, ' type:', type(x4)) x5 = eval(input('Entry x5? ')) print('x5 =', x5, ' type:', type(x5))	x4 = 43 type: <class 'int'> Entry x5? 2.2 x5 = 2.2 type: <class 'float'> Please enter number 1, number 2: 12
num1, num2 = eval(input('Please enter number 1, number 2: ')) print(num1, '+', num2, '=', num1 + num2)	Please enter number 1, number 2: 12,12 12 + 12 = 24
print(eval(input())) print('A', end='') print('B', end='') print('C', end='') print() print('X') print('Y') print('Z')	2 A B C X Y Z
w, x, y, z = 10, 15, 20, 25 print(w, x, y, z) print(w, x, y, z, sep=',') print(w, x, y, z, sep='') print(w, x, y, z, sep=':') print(w, x, y, z, sep='-----')	10 15 20 25 10,15,20,25 10152025 10:15:20:25 10-----15-----20-----25
x = 6 print(6) print("6")	6 6
x = 7 print(x) print("x")	7 x
value1 = eval(input('Please enter a number: ')) value2 = eval(input('Please enter another number: ')) sum = value1 + value2 print(value1, '+', value2, '=', sum)	Please enter a number: 3 Please enter another number: 2 3 + 2 = 5
x, y, z = 3, -4, 0 x = -x y = -y z = -z print(x, y, z)	-3 4 0
print(-(4 - 5)) print(10/3, 3/10, 10//3, 3//10) print(10%3, 3%10) print(10.0/3.0, 3.0/10.0, 10.0//3.0, 3//10.0)	1 3.3333333333333335 0.3 3 0 1 1 3 3.3333333333333335 0.3 3.0 0.0
one = 1.0 one_third = 1.0/3.0 zero = one - one_third - one_third - one_third print('one =', one, ' one_third =', one_third, ' zero =', zero)	one = 1.0 one_third = 0.3333333333333333 zero = 1.1102230246251565e-16
one = 1.0	one = 1.0 one_tenth = 0.1 zero =

one_tenth = 1.0/10.0	1.1102230246251565e-16
print('one =', one, ' one_tenth =', one_tenth, ' zero =', zero)	
print(-3 + 2)	-1
print(-(3 + 2))	-5
dividend, divisor = eval(input('Please enter two numbers to divide: '))	Please enter two numbers to divide: 3,5 3 / 5 = 0.6
print(dividend, '/', divisor, "=", dividend/divisor)	
value = eval(input('Please enter a number to cut in half: '))	Please enter a number to cut in half: 32
print(value/2)	16.0
degreesF = eval(input('Enter the temperature in degrees F: '))	Enter the temperature in degrees F: 23
degreesC = 5/9*(degreesF - 32);	23 degrees F = -5.0 degrees C
print(degreesF, "degrees F =", degreesC, 'degrees C')	
seconds = eval(input("Please enter the number of seconds:"))	Please enter the number of seconds:43
hours = seconds // 3600 # 3600 seconds = 1 hours	0 hr, 0 min, 43 sec
seconds = seconds % 3600	
minutes = seconds // 60 # 60 seconds = 1 minute	
seconds = seconds % 60	
print(hours, "hr,", minutes, "min,", seconds, "sec")	
seconds = eval(input("Please enter the number of seconds:"))	Please enter the number of seconds:45
hours = seconds // 3600 # 3600 seconds = 1 hours	
seconds = seconds % 3600	
minutes = seconds // 60 # 60 seconds = 1 minute	
seconds = seconds % 60	
print(hours, ":", sep="", end="")	
tens = minutes // 10	0:00:45
ones = minutes % 10	
print(tens, ones, ":", sep="", end="")	
tens = seconds // 10	Enter the temperature in degrees F: 24
ones = seconds % 10	24 degrees F = -17.77777777777778 degrees C
print(tens, ones, sep ="")	
degreesF, degreesC = 0, 0	
degreesC = 5/9*(degreesF - 32)	
degreesF = eval(input('Enter the temperature in degrees F: '))	
print(degreesF, "degrees F =", degreesC, 'degrees C')	
x1 = 2	3
x2 = 2	1
x1 += 1	
x2 -= 1	
print(x1)	
print(x2)	

DBMS ASSIGNMENTS

PART A

INDEX

SER	DBMS EXERCISES (PART A)	PAGE NO
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3	ACTIVITY 3: (LOGICAL, RELATIONAL OPERATORS)	15-21
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DBMS ASSIGNMENTS

PART A

Activity 1:
Database : Student (DDL, DML statements)
Table: Student

Name	Regno	Class	Major
Smith	17	1	CS
Brown	8	2	CS

Table: Course

CourseName	CourseNumber	CreditHours	Department
Intro to computer science	CS1310	4	CS
Data Structure	CS3320	4	CS
Discrete Mathematics	MATH2410	3	MATH
Database	CS3380	3	CS

Table: Section

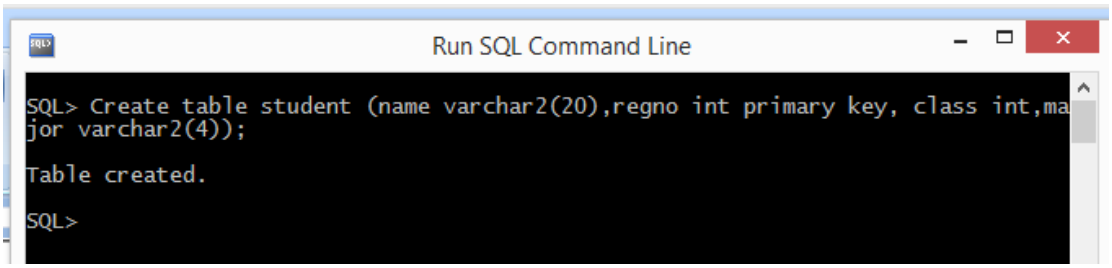
SectionIndentifier	CourseNumber	Year	Instructor
85	MATH2410	98	King
92	CS1310	98	Andreson
102	CS3320	99	Knuth
112	MATH2410	99	Chang
119	CS1310	99	Andreson
135	CS3380	99	Stone

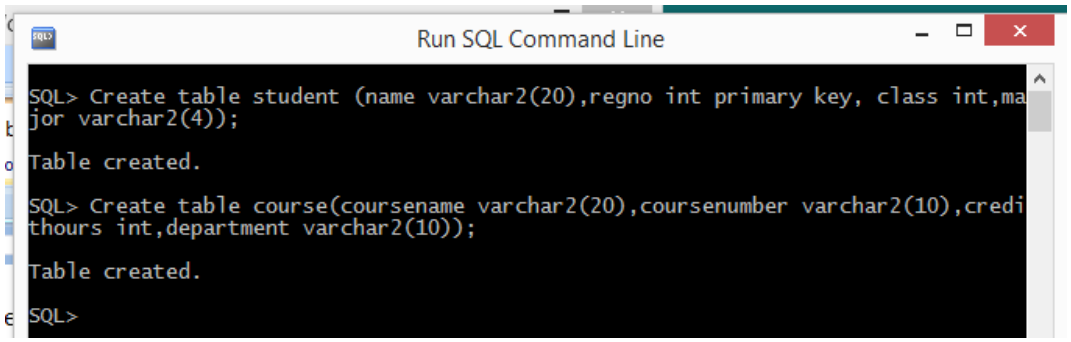
Table: Grade_report

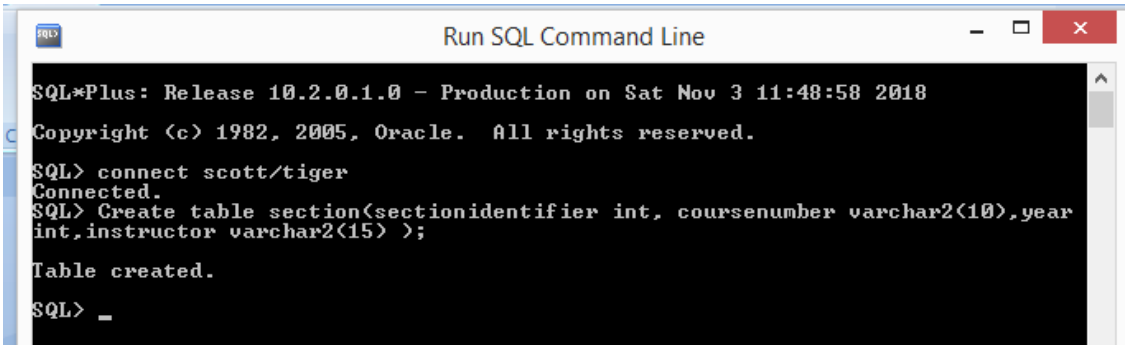
Regno	Section_identifier	Grade
17	112	B
17	119	C
8	85	A
8	92	A
8	102	B
8	135	A

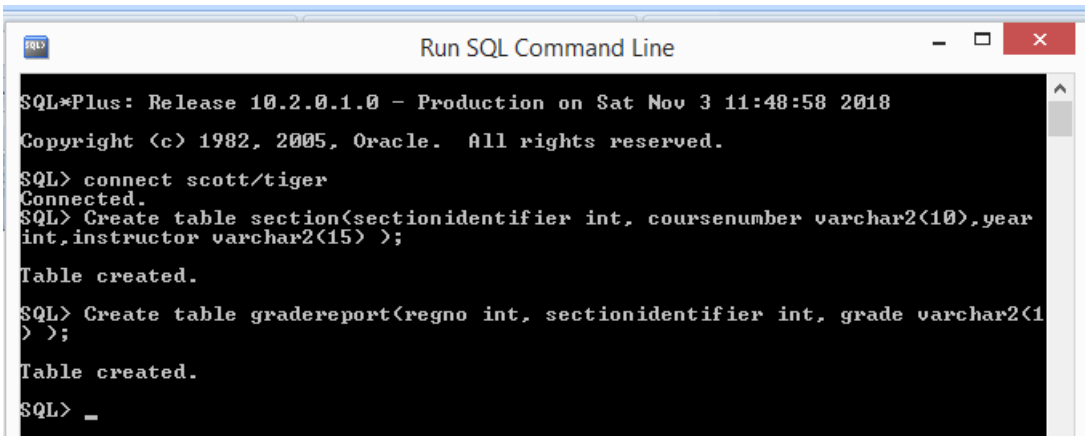
1. **CREATE TABLES USING CREATE STATEMENT**
2. **INSERT ROWS TO INDIVIDUAL TABLES USING INSERT STATEMENT**
3. **ALTER TABLE SECTION ADD NEW FIELD SECTION AND UPDATE THE RECORDS**
4. **DELETE BROWN'S GRADE REPORT**
5. **DROP THE TABLE SECTION**

1. CREATE TABLES USING CREATE STATEMENT

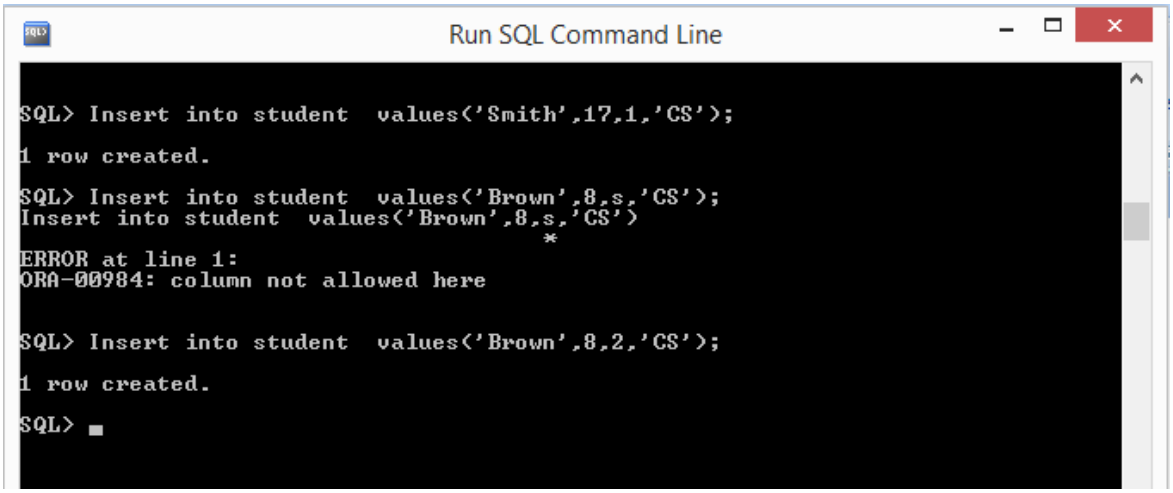


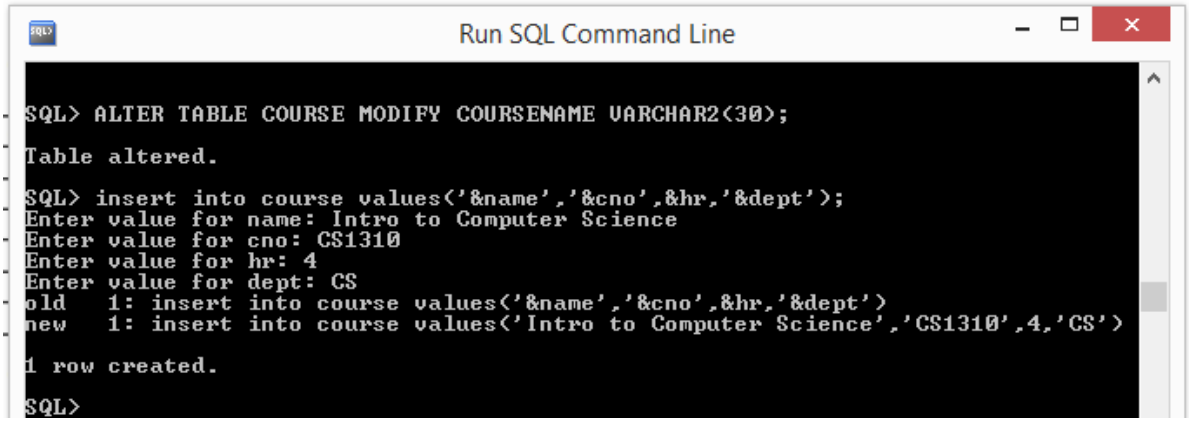




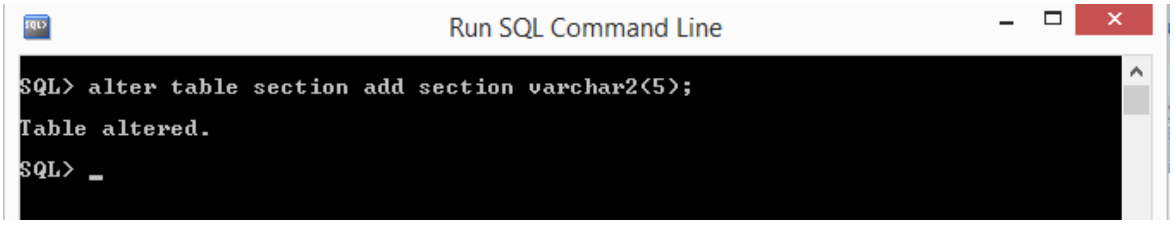


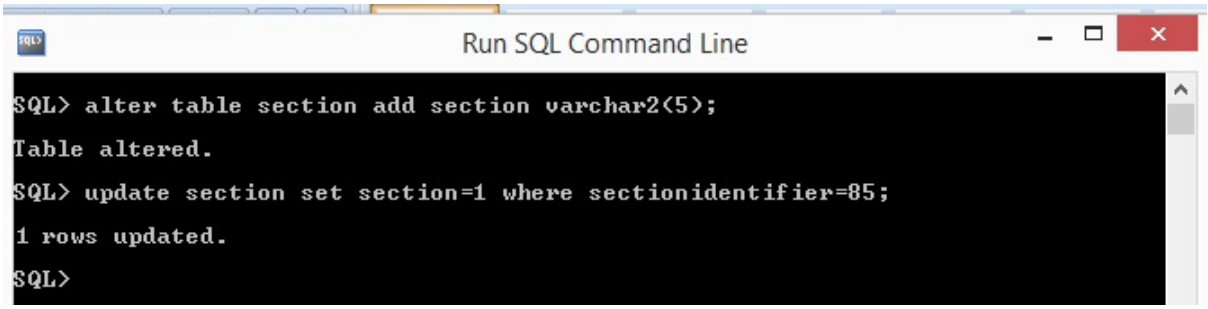
2. INSERT ROWS TO INDIVIDUAL TABLES USING INSERT STATEMENT



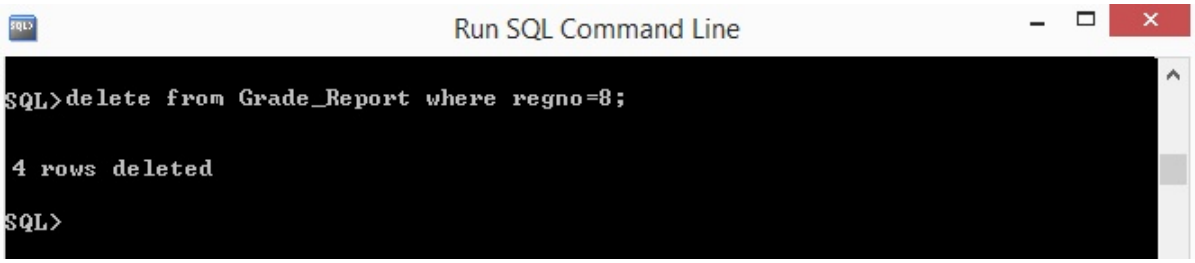


3. ALTER TABLE SECTION ADD NEW FIELD SECTION AND UPDATE THE RECORDS

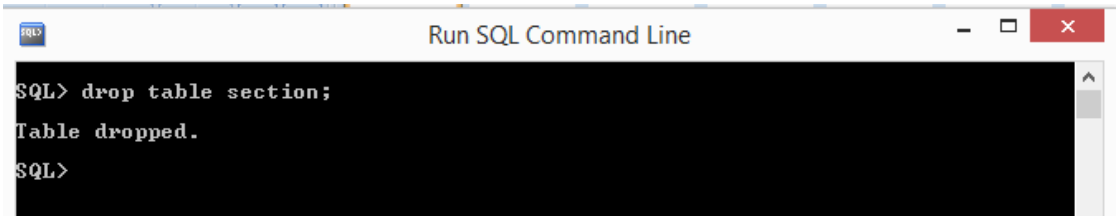




4. DELETE BROWN'S GRADE REPORT



5. DROP THE TABLE SECTION



Activity 2: (Select clause, Arithmetic Operators)
Database: employee
Create Following **tables** and insert **tuples** with suitable constraints

EMPLOYEE

EMPID	FIRSTANAME	LASTNAME	Hire_Date	ADDRESS	CITY
1001	George	Smith	11-May-06	83 first street	Paris
1002	Mary	Jones	25-Feb-08	842 Vine Ave	Losantiville
1012	Sam	Tones	12-Sep-05	33 Elm St.	Paris
1015	Peter	Thompson	19-Dec-06	11 Red Road	Paris
1016	Sarath	Sharma	22-Aug-07	440 MG Road	New Delhi
1020	Monika	Gupta	07-Jun-08	9 Bandra	Mumbai

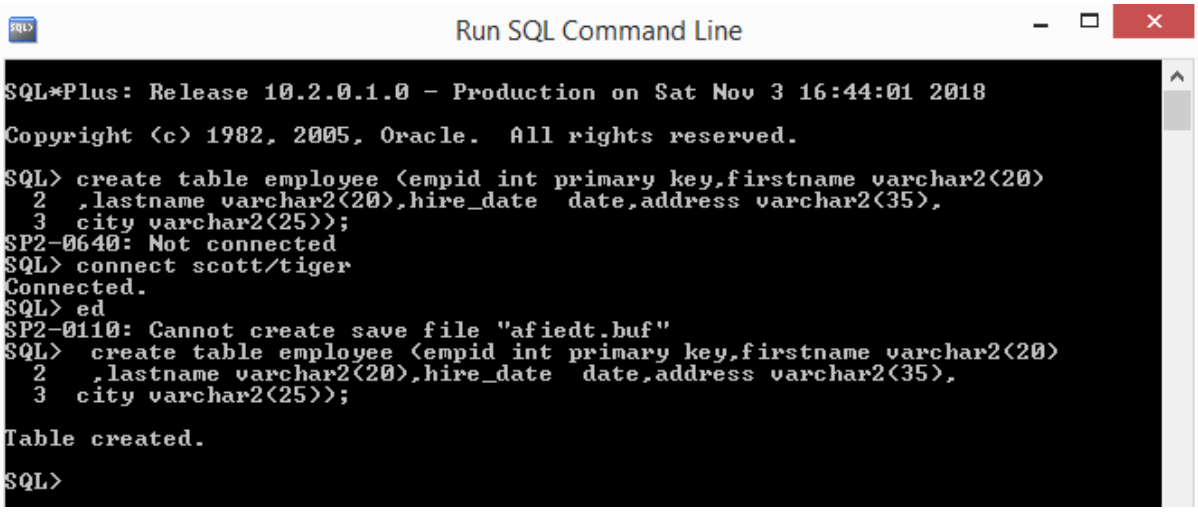
EMPSALARY

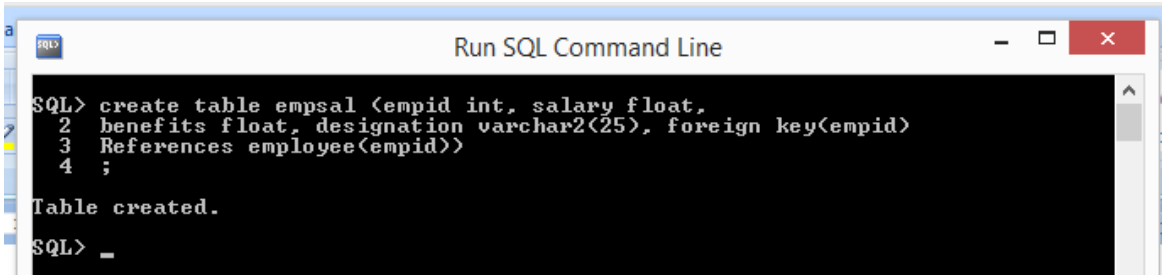
EMPID	SALARY	BENEFITS	DESIGNATION
1001	10000	3000	Manager
1002	8000	1200	Salesman
1012	20000	5000	Director
1015	6500	1300	Clerk
1016	6000	1000	Clerk
1020	8000	1200	Salesman

Write queries for the following

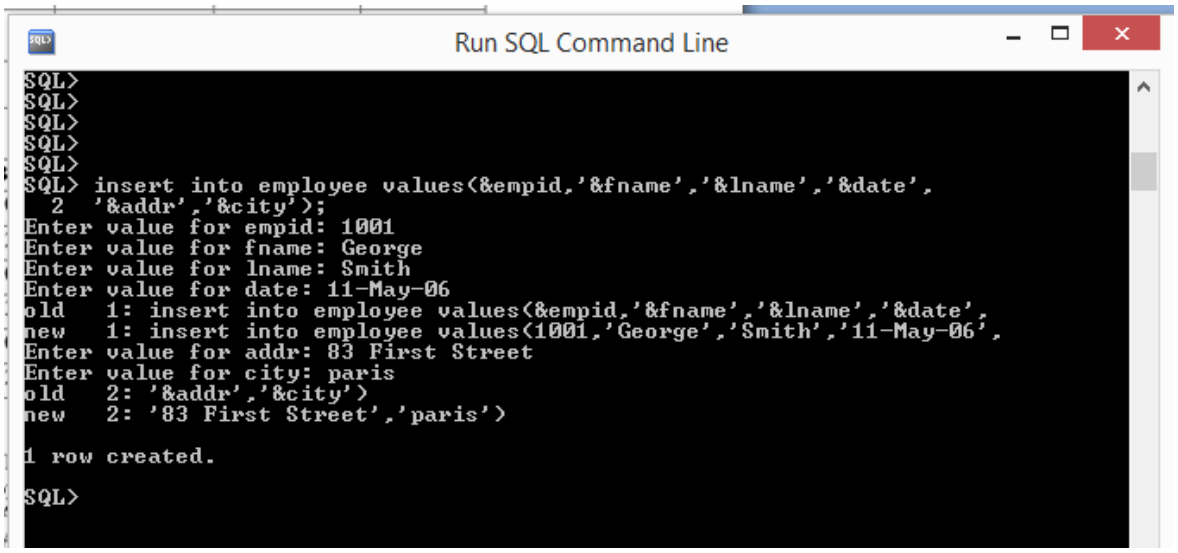
1. To display FIRSTNAME, LASTNAME, ADDRESS AND CITY of all employees living in PARIS.
2. To display the content of employee table in descending order of FIRSTNAME
3. Select FIRSTNAME and SALARY of salesman
4. To display the FIRSTNAME,LASTNAME, AND TOTAL SALARY of all employees from the table EMPLOYEE and EMPSALARY. Where TOTAL SALARY is calculated as SALARY+BENEFITS
5. List the Names of employees, who are more than 1 year old in the organization
6. Count number of distinct DESINGATION from EMPSALARY
7. List the employees whose names have exactly 6 characters
8. Add new column PHONE_NO to EMPLOYEE and update the records
9. List employee names, who have joined before 15-Jun-08 and after 16-Jun-07
10. Generate Salary slip with Name, Salary, Benefits, HRA-50%, DA-30%, PF-12%, Calculate gross. Order the result in descending order of the gross.

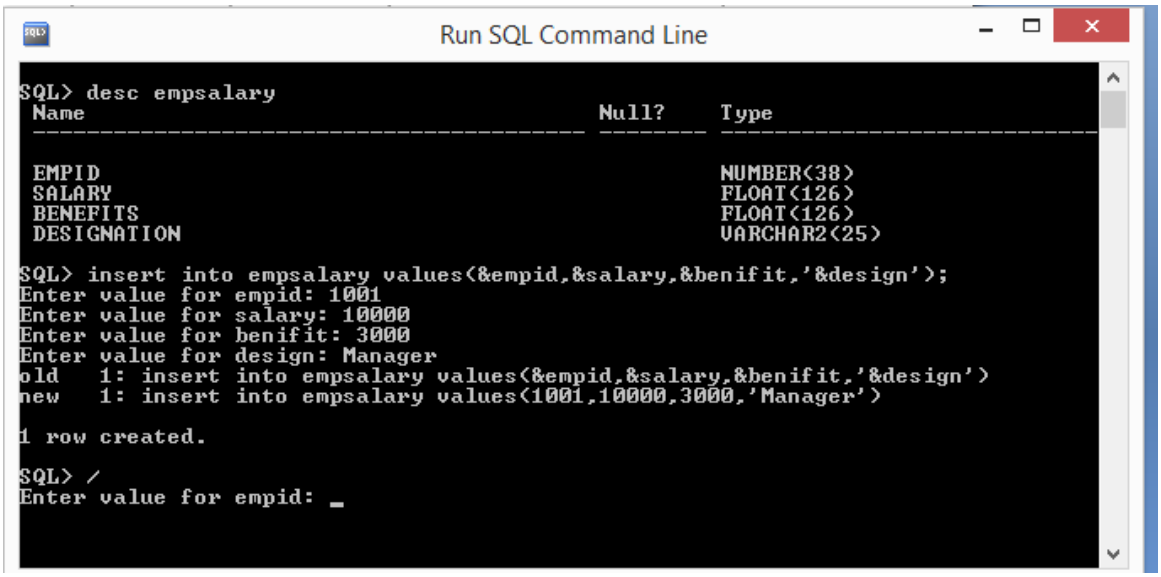
CREATING EMPLOYEE AND EMP SAL TABLES

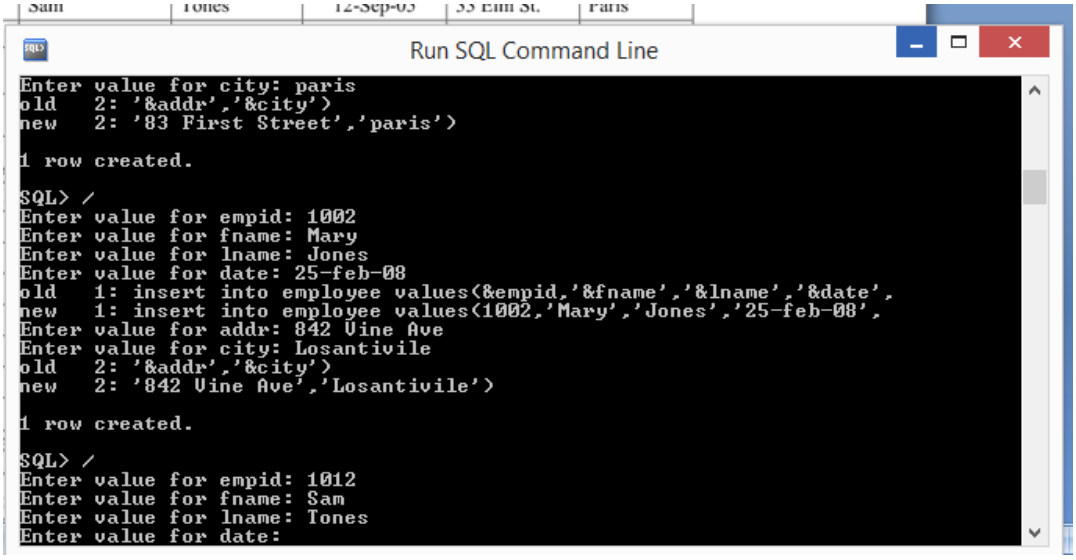




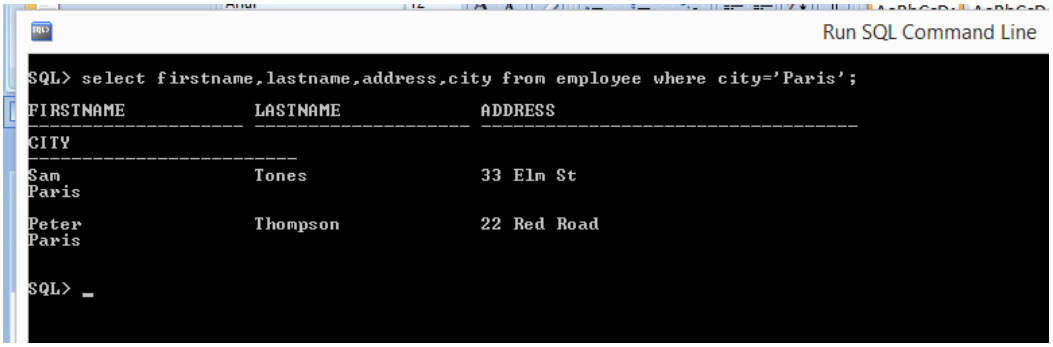
INSERTING RECORDS IN EMPLOYEE TABLE



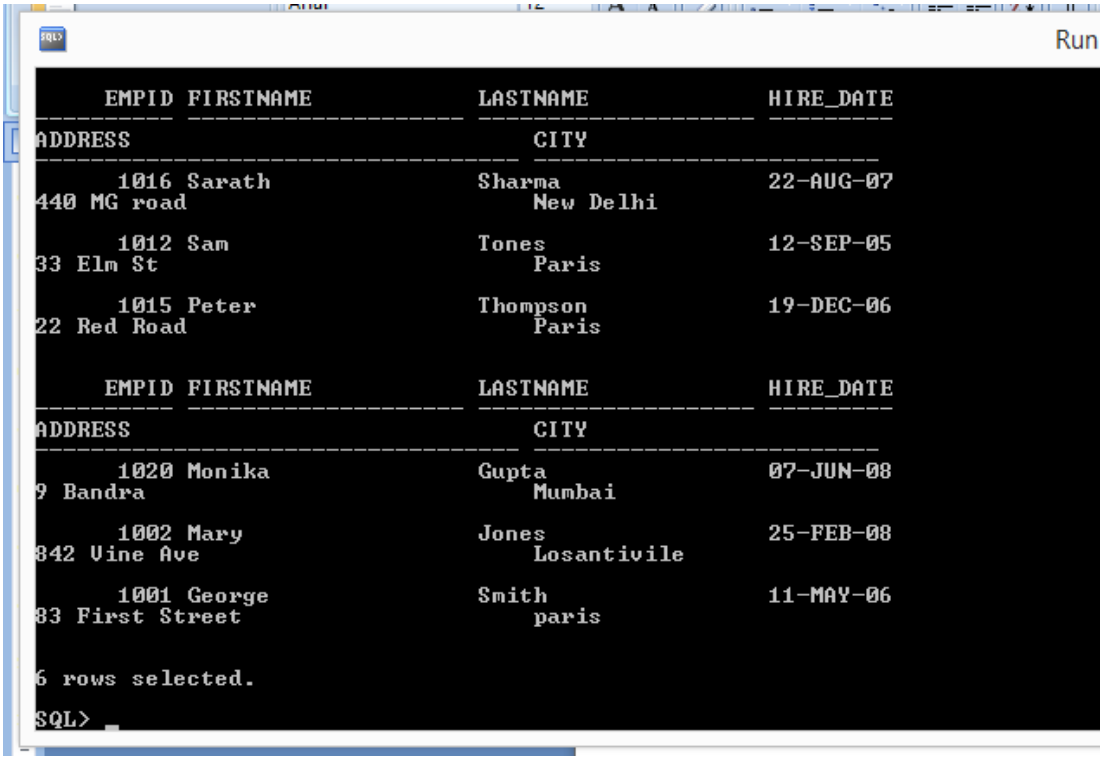

Run SQL Command Line
SQL> desc empsalary
Name Null? Type
EMPID NUMBER(38)
SALARY FLOAT(126)
BENEFITS FLOAT(126)
DESIGNATION VARCHAR2(25)
SQL> insert into empsalary values(&empid,&salary,&benifit,'&design');
Enter value for empid: 1001
Enter value for salary: 10000
Enter value for benifit: 3000
Enter value for design: Manager
old 1: insert into empsalary values(&empid,&salary,&benifit,'&design')
new 1: insert into empsalary values(1001,10000,3000,'Manager')
1 row created.
SQL> /
Enter value for empid:


Run SQL Command Line
Enter value for city: paris
old 2: '&addr','&city')
new 2: '83 First Street','paris')
1 row created.
SQL> /
Enter value for empid: 1002
Enter value for fname: Mary
Enter value for lname: Jones
Enter value for date: 25-feb-08
old 1: insert into employee values(&empid,'&fname','&lname','&date',
new 1: insert into employee values(1002,'Mary','Jones','25-feb-08',
Enter value for addr: 842 Vine Ave
Enter value for city: Losantivile
old 2: '&addr','&city')
new 2: '842 Vine Ave','Losantivile')
1 row created.
SQL> /
Enter value for empid: 1012
Enter value for fname: Sam
Enter value for lname: Tones
Enter value for date:

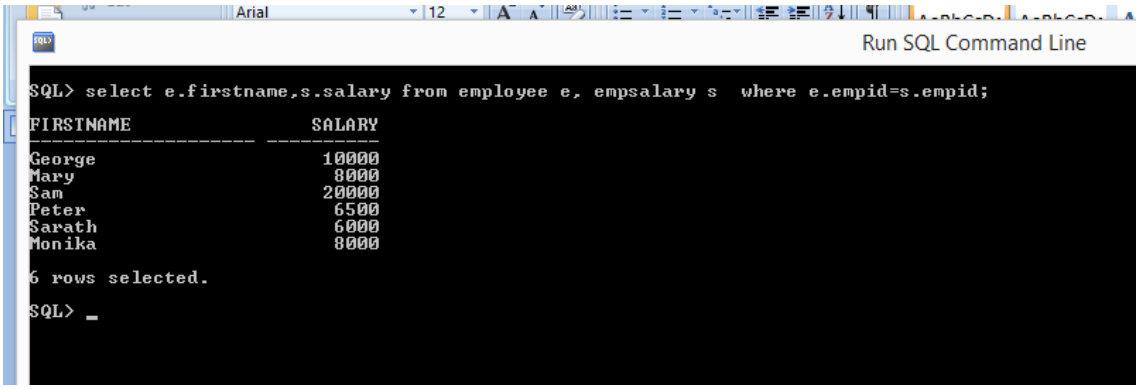
1. **TO DISPLAY FIRSTNAME, LASTNAME, ADDRESS AND CITY OF ALL EMPLOYEES LIVING IN PARIS.**



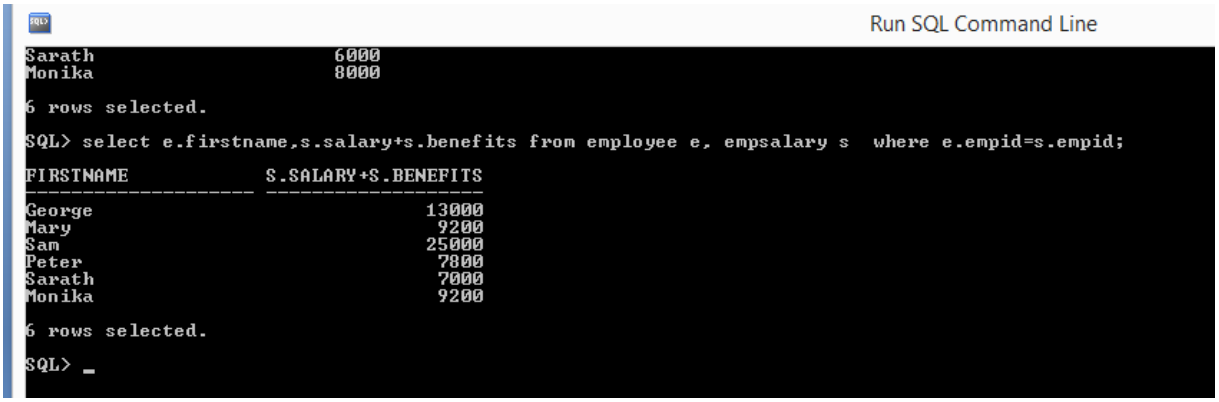
2. **TO DISPLAY THE CONTENT OF EMPLOYEE TABLE IN DESCENDING ORDER OF FIRSTNAME.**



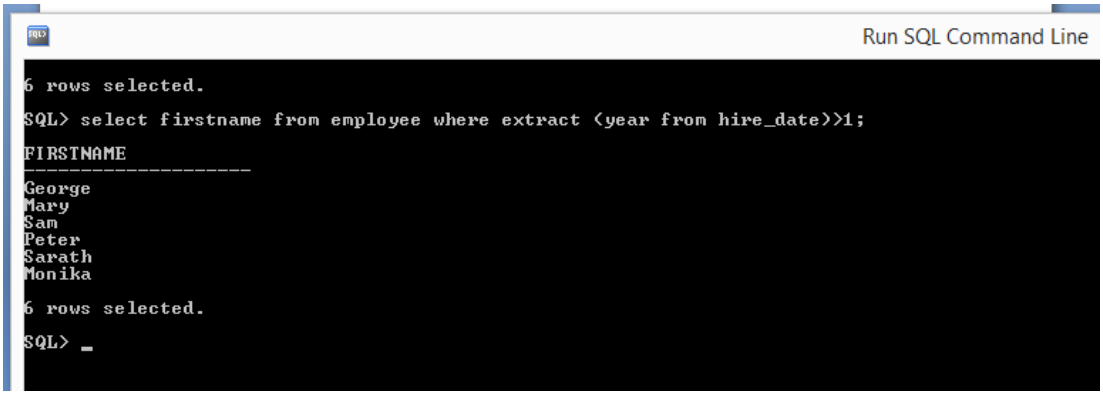
3. SELECT FIRSTNAME AND SALARY OF SALESMAN



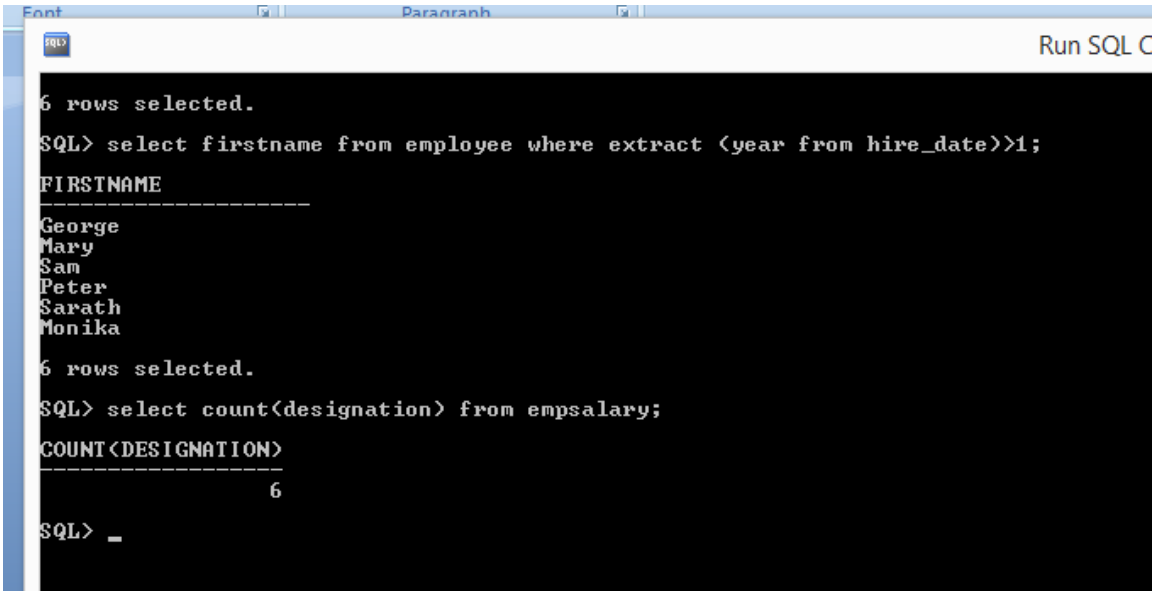
4. TO DISPLAY THE FIRSTNAME,LASTNAME, AND TOTAL SALARY OF ALL EMPLOYEES FROM THE TABLE EMPLOYEE AND EMPSALARY. WHERE TOTAL SALARY IS CALCULATED AS SALARY+BENEFITS.



5. LIST THE NAMES OF EMPLOYEES, WHO ARE MORE THAN 1 YEAR OLD IN THE ORGANIZATION

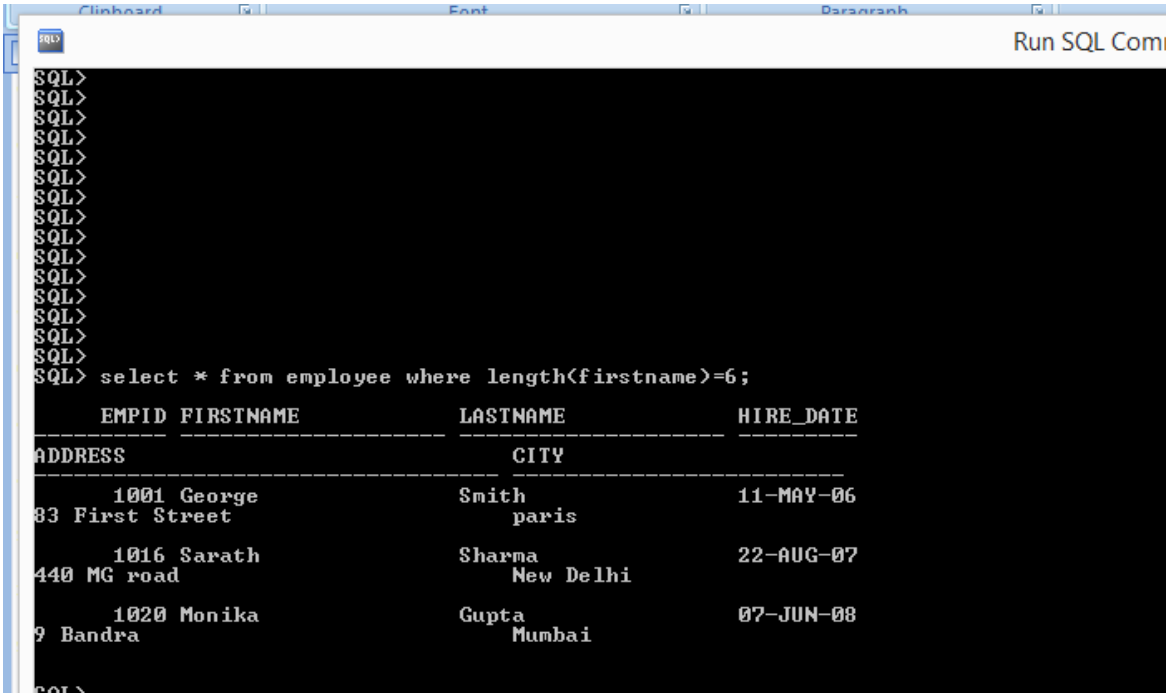


6. COUNT NUMBER OF DISTINCT DESINGATION FROM EMPSALARY



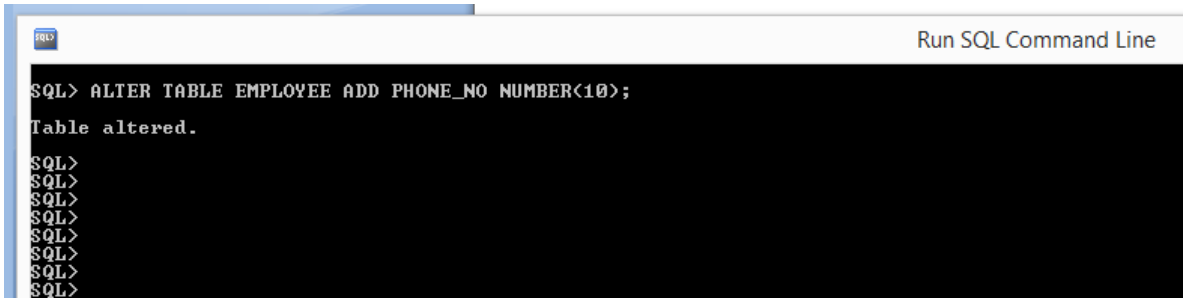
```
6 rows selected.

SQL> select firstname from employee where extract (year from hire_date)>1;

FIRSTNAME
--------------------
George
Mary
Sam
Peter
Sarath
Monika

6 rows selected.

SQL> select count(designation) from empsalary;

COUNT(DESIGNATION)
------------------
                 6

SQL>
```

7. LIST THE EMPLOYEE WHOSE NAME HAS EXACTLY 6 CHARACTERS.

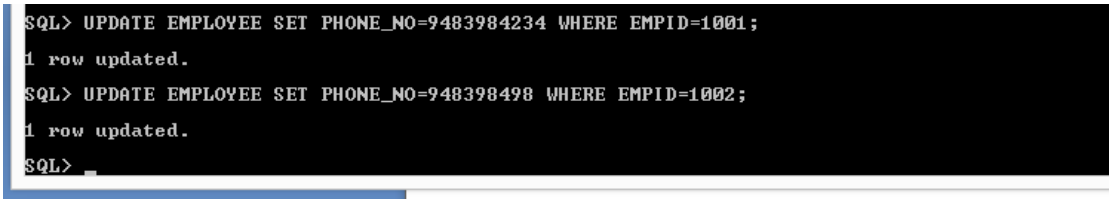


```
SQL> select * from employee where length(firstname)=6;

     EMPID FIRSTNAME            LASTNAME             HIRE_DATE
---------- -------------------- -------------------- ---------
ADDRESS                            CITY
---------------------------------- -------------------------
      1001 George                Smith                11-MAY-06
83 First Street                    paris

      1016 Sarath                Sharma               22-AUG-07
440 MG road                        New Delhi

      1020 Monika                Gupta                07-JUN-08
9 Bandra                           Mumbai
```

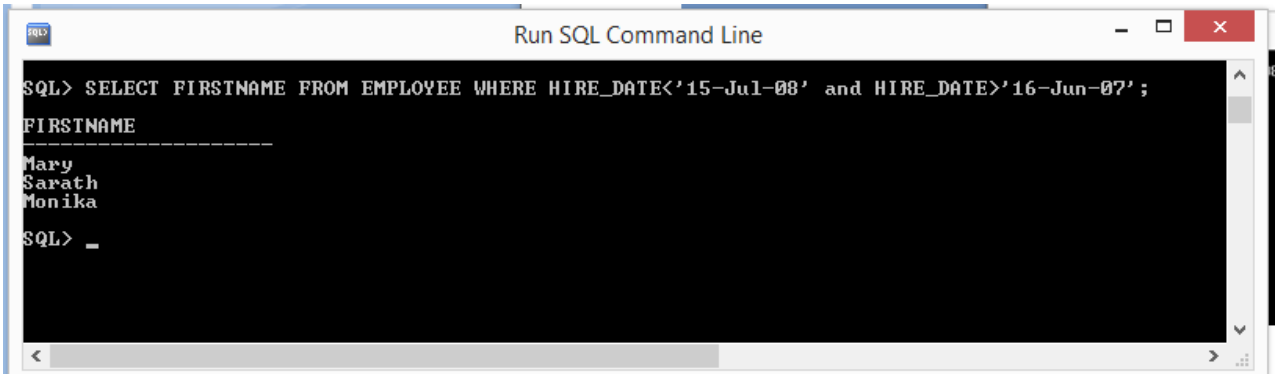
8. ADD NEW COLUMN PHONE_NO TO EMPLOYEE AND UPDATE THE RECORDS.



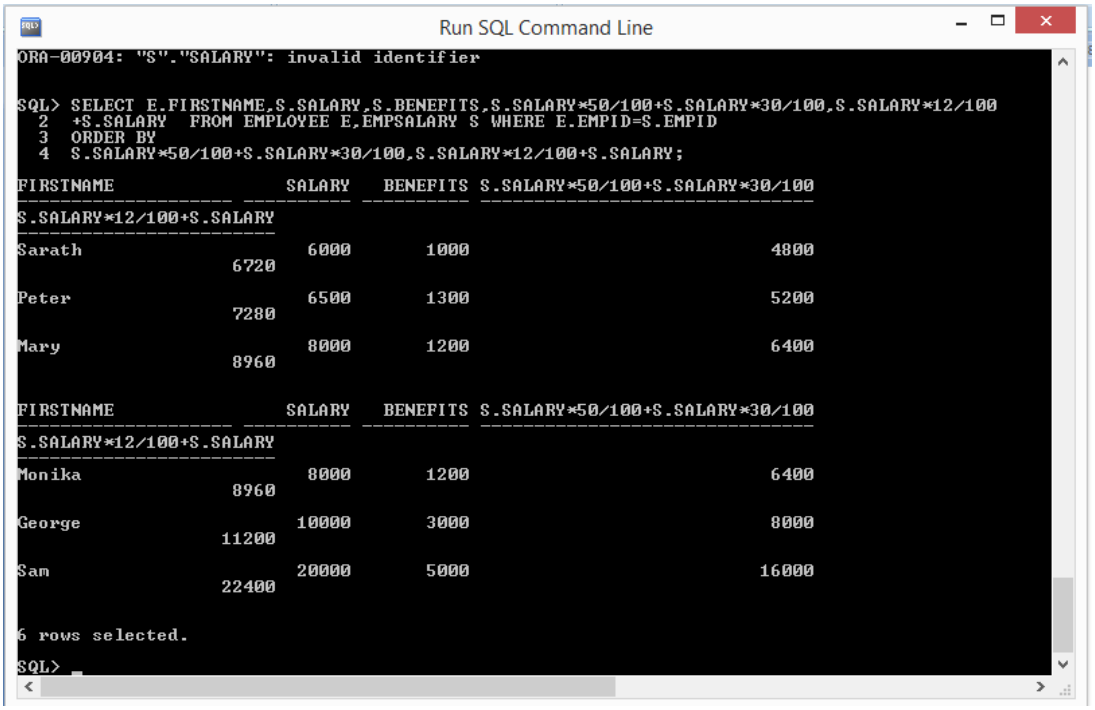
UPDATING RECORDS:



9. LIST EMPLOYEE NAMES, WHO HAVE JOINED BEFORE 15-JU-08 AND AFTER 16-JUN-07.



10. GENERATE SALARY SLIP WITH NAME, SALARY, BENEFITS, HRA-50%, DA-30%, PF-12%, CALCULATE GROSS, ORDER THE RESULT IN DESCENDING ORDER OF GROSS.



Activity 3: (Logical, Relational Operators)

Database: Library
Create Following **tables** and insert **tuples** with suitable constraints

Table: Books

Book_Id	Book_name	Author_Name	Publishers	Price	Type	Quantity
C0001	The Klone and I	Lata Kappor	EPP	355	Novel	5
F0001	The Tears	William Hopkins	First Publ	650	Fiction	20
T0001	My First C++	Brain & Brooke	ERP	350	Text	10
T0002	C++ Brainworks	A.W.Rossaine	TDH	350	Text	15
F0002	Thunderbolts	Ana Roberts	First Publ.	750	Fiction	50

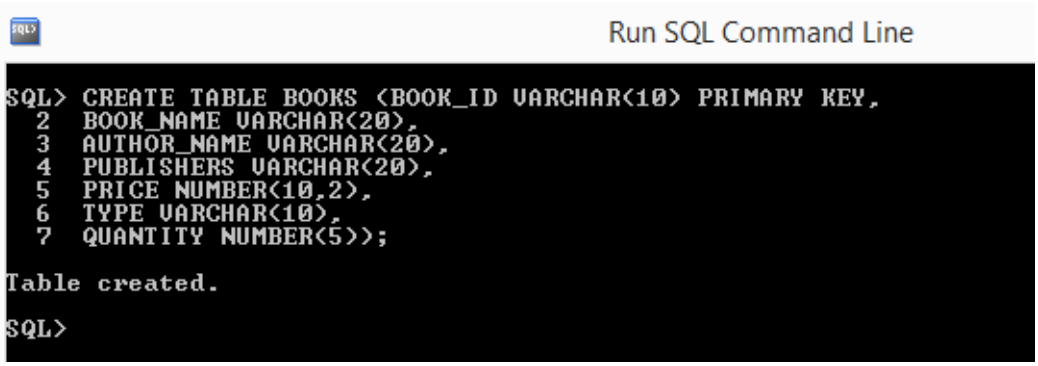
Table : Issued

Book_Id	Quantity_Issued
T0001	4
C0001	5
F0001	2
T0002	5
F0002	8

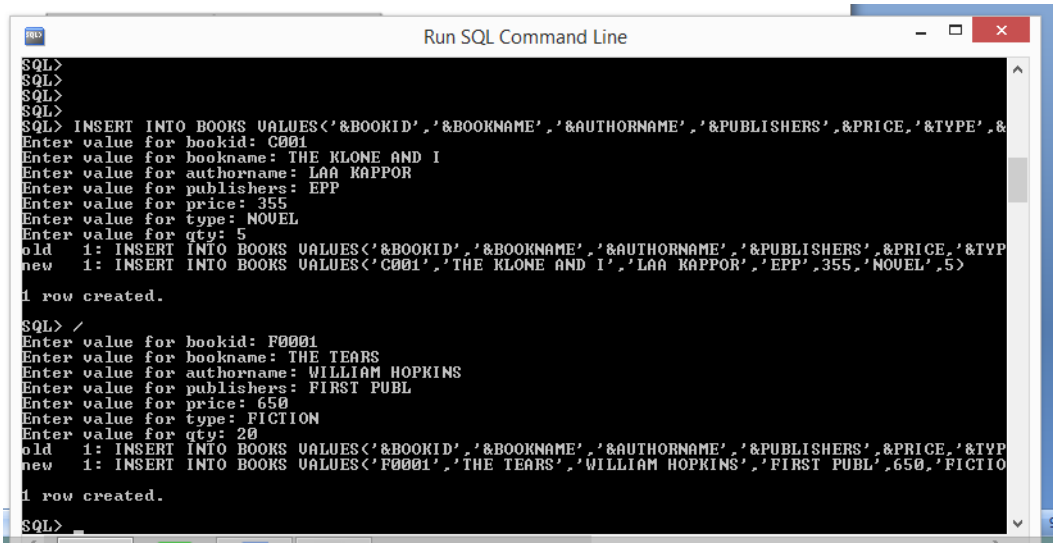
Write queries for the following

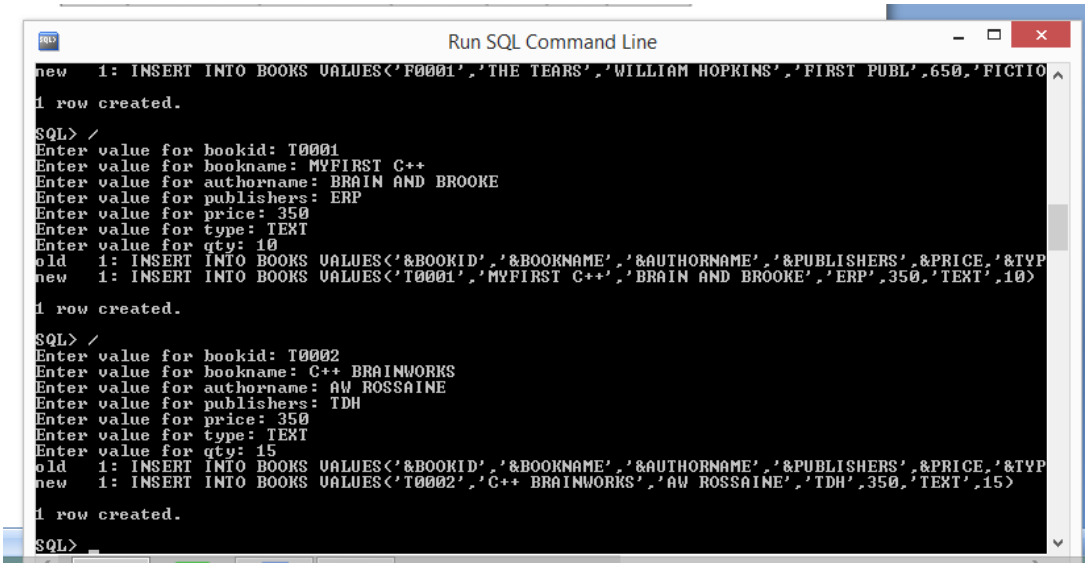
1. To show Book name, Author name and price of books of **First Publ**. publisher
2. Display Book id, Book name and publisher of books having quantity more than 8 and price less than 500
3. Select Book id, book name, author name of books which is published by other than ERP publishers and price between 300 to 700
4. Generate a Bill with Book_id, Book_name, Publisher, Price, Quantity, 4% of VAT –Total"
5. Display book details with book id's C0001, F0001, T0002, F0002 (Hint: use IN operator)
6. Display Book list other than, type Novel and Fiction
7. Display book details with author name starts with letter _A'
8. Display book details with author name starts with letter _T' and ends with _S'
9. Select BookId, BookName, Author Name , Quantity Issued where Books.BooksId = Issued.BookId
10. List the book_name, Author_name, Price. In ascending order of Book_name and then on descending order of price

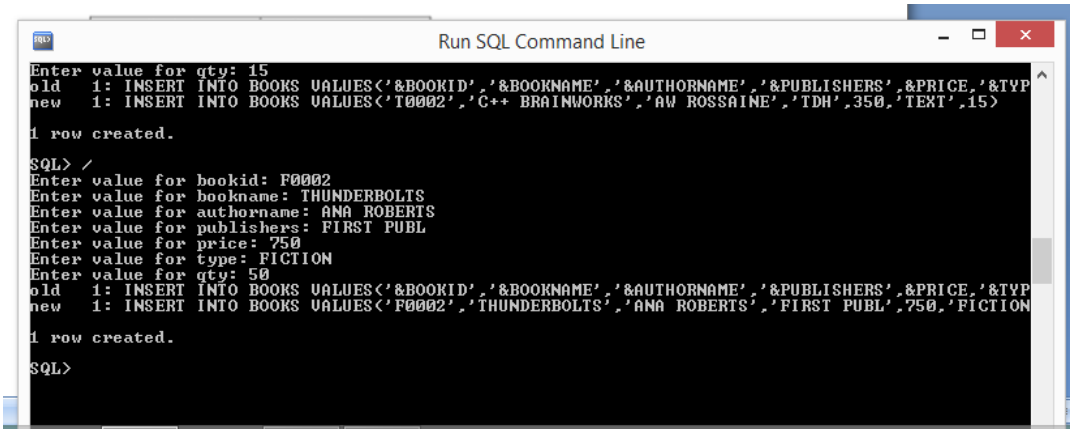
CREATING TABLE BOOKS



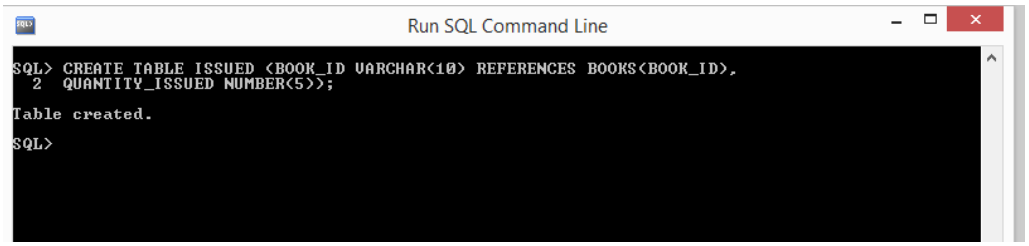
INSERTING RECORDS IN BOOKS TABLE



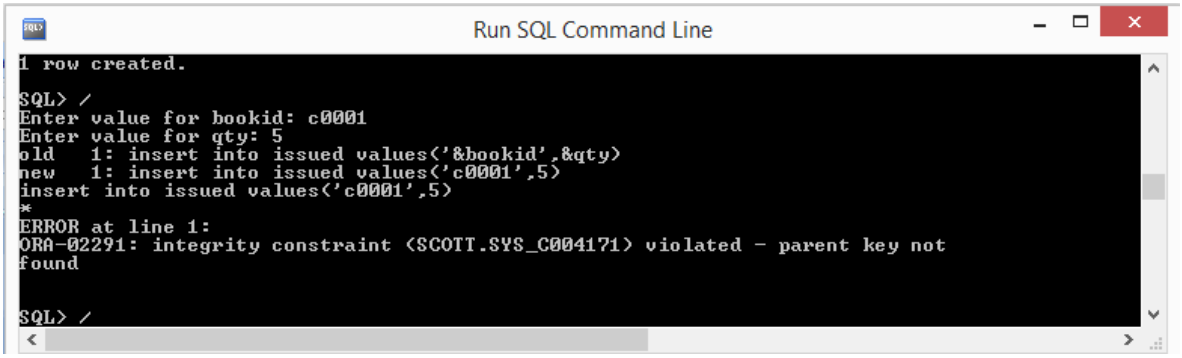




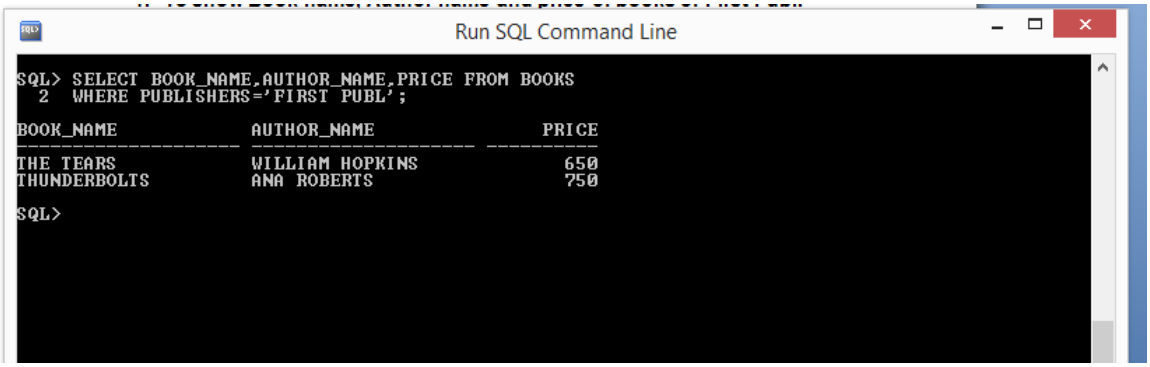
CREATING TABLE: ISSUED.



INSERTING RECORDS IN ISSUE TABLE

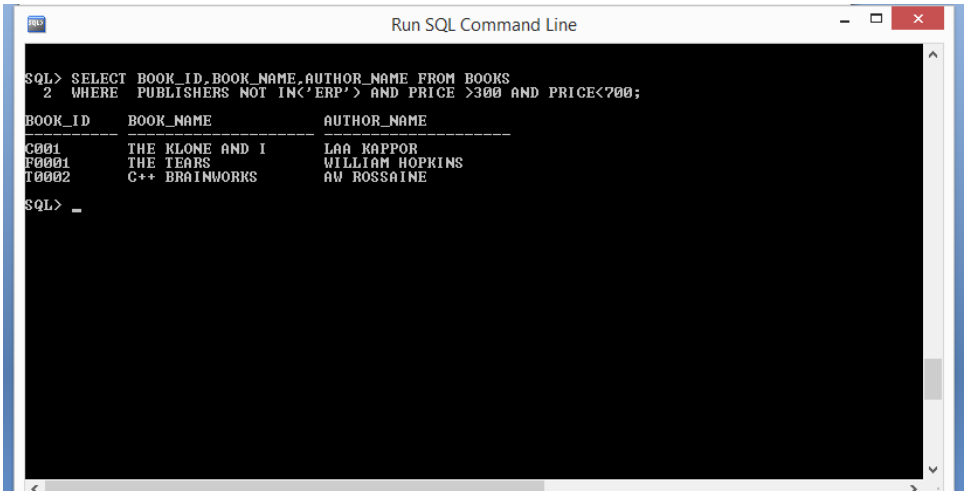


1. **TO SHOW BOOK NAME, AUTHOR NAME AND PRICE OF BOOKS OF FIRST PUBL. PUBLISHER**

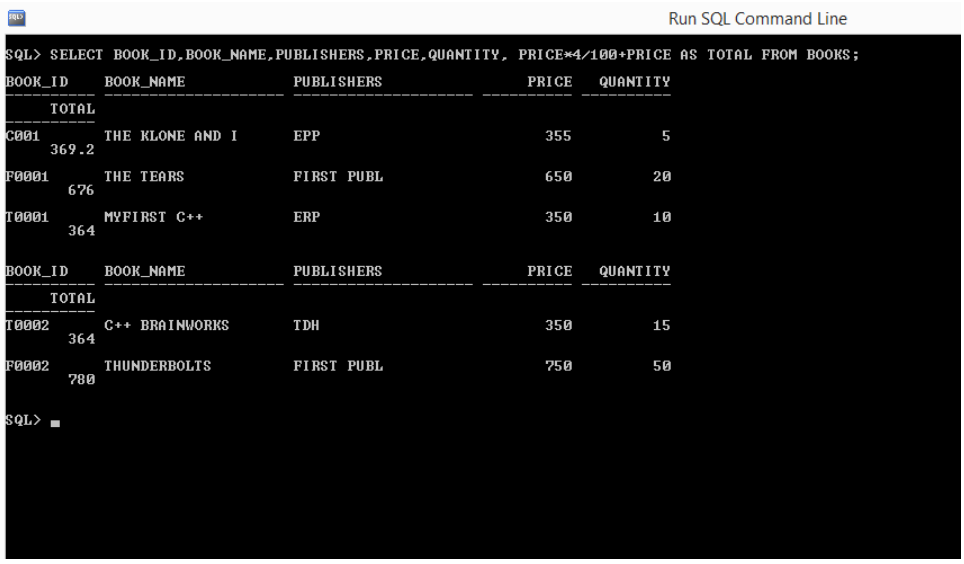


2. **DISPLAY BOOK ID, BOOK NAME AND PUBLISHER OF BOOKS HAVING QUANTITY MORE THAN 8 AND PRICE LESS THAN 500**

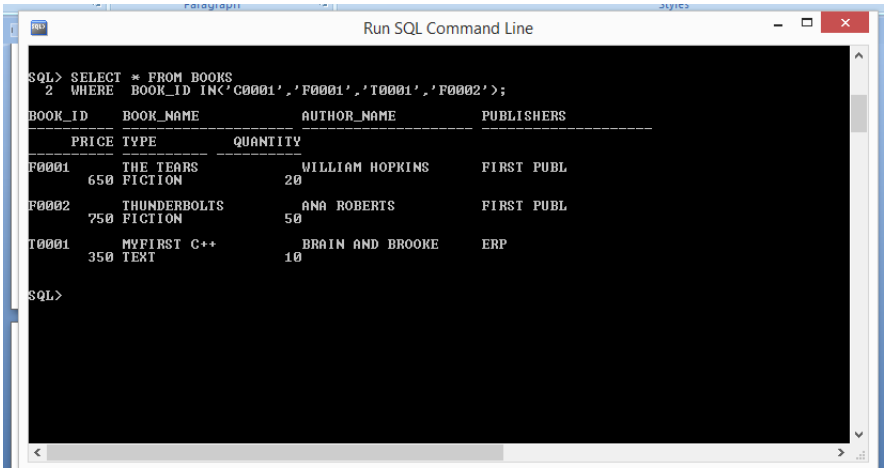
3. **SELECT BOOK ID, BOOK NAME, AUTHOR NAME OF BOOKS WHICH IS PUBLISHED BY OTHER THAN ERP PUBLISHERS AND PRICE BETWEEN 300 TO 700.**



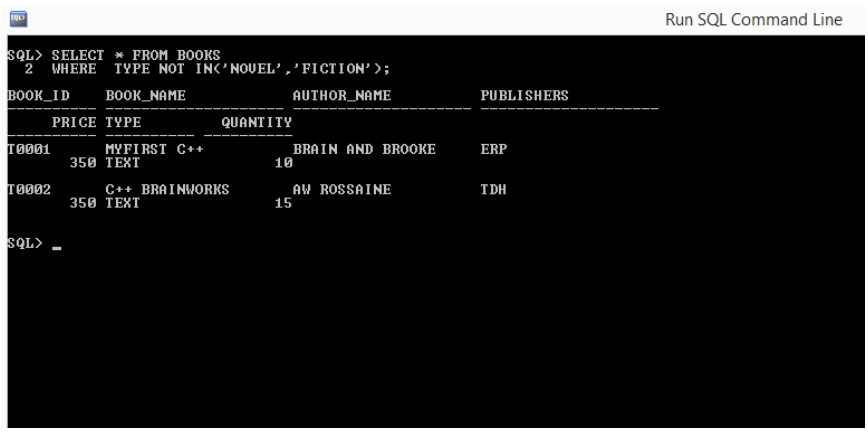
4. **GENERATE A BILL WITH BOOK_ID, BOOK_NAME, PUBLISHER, PRICE, QUANTITY, 4% OF VAT —TOTAL‖**



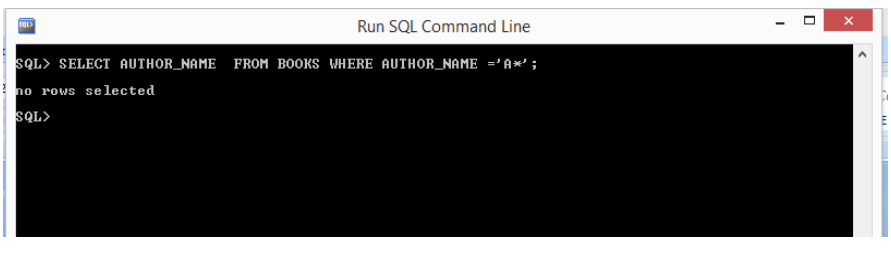
5. **DISPLAY BOOK DETAILS WITH BOOK ID'S C0001, F0001, T0002, F0002 (HINT: USE IN OPERATOR)**



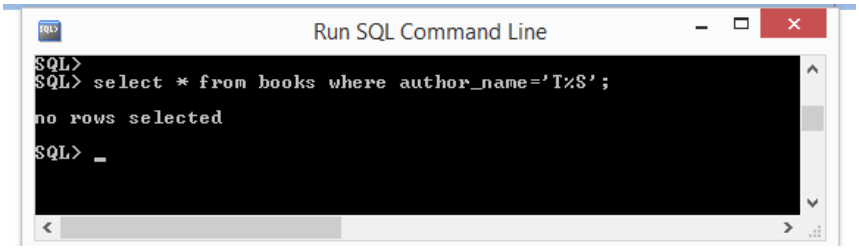
6. **DISPLAY BOOK LIST OTHER THAN, TYPE NOVEL AND FICTION**



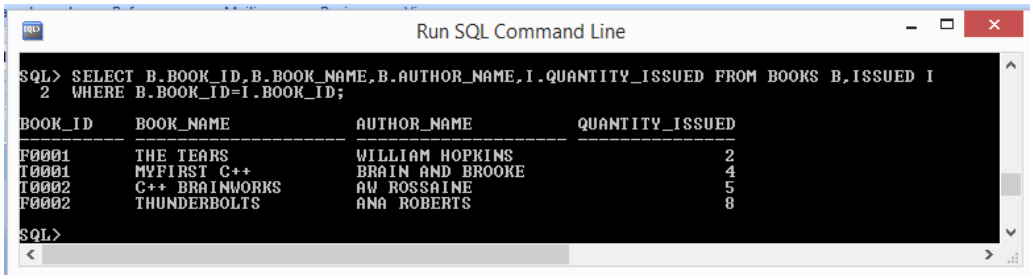
7. **DISPLAY BOOK DETAILS WITH AUTHOR NAME STARTS WITH LETTER _A'**



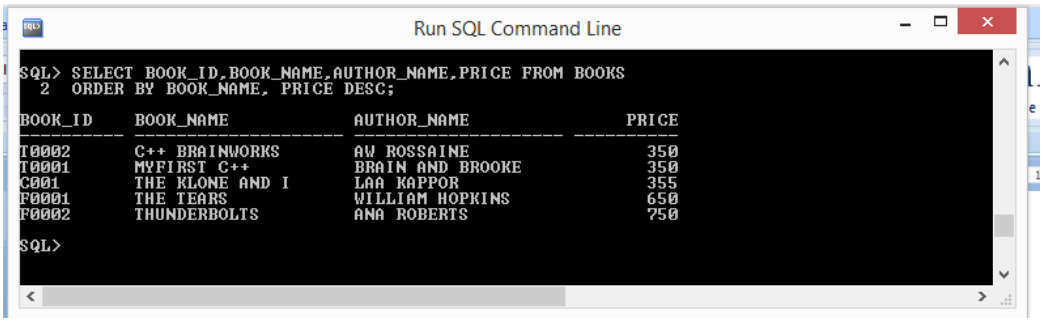
8. **DISPLAY BOOK DETAILS WITH AUTHOR NAME STARTS WITH LETTER _T‘ AND ENDS WITH _S‘**



9. **SELECT BOOKID, BOOKNAME, AUTHOR NAME , QUANTITY ISSUED WHERE BOOKS.BOOKSID = ISSUED.BOOKID**



10. **LIST THE BOOK_NAME, AUTHOR_NAME, PRICE. IN ASCENDING ORDER OF BOOK_NAME AND THEN ON DESCENDING ORDER OF PRICE**



Activity 4: (Date Functions)
Database : Lab
Create Following **table** and insert **tuples** with suitable constraints

Table : Equipment_Details

No	ItemName	Costperitem	Quantity	Dateofpurchase	Warranty	Operational
1	Computer	30000	9	21/5/07	2	7
2	Printer	5000	3	21/5/06	4	2
3	Scanner	8000	1	29/8/08	3	1
4	Camera	7000	2	13/6/05	1	2
5	UPS	15000	5	21/5/08	1	4
6	Hub	8000	1	31/10/08	2	1
7	Plotter	25000	2	11/1/09	2	2

(Use date functions and aggregate functions)

1. To select the ItemName purchase after 31/10/07
2. Extend the warrenty of each item by 6 months
3. Display Itemname , Dateof purchase and number of months between purchase date and present date
4. To list the ItemName in ascending order of the date of purchase where quantity is more than 3.
5. To count the number, average of costperitem of items purchased before 1/1/08
6. To display the minimum warranty , maximum warrenty period
7. To Display the day of the date , month , year of purchase in characters
8. To round of the warranty period to month and year format.
9. To display the next Sunday from the date '07-JUN-96'
10. To list the ItemNaName, which are within the warranty period till present date

TABLE CREATION – EQUIPMENT DETAILS

price between 300 to 700

Run SQL Command Line

```
SQL>
SQL> CREATE TABLE EQUIPMENT_DETAILS
  2  (NO INT PRIMARY KEY,ITEMNAME VARCHAR2(20),COSTPERITEM NUMBER(12,2),QTY INT,
  3  DATEOFPURCHASE DATE,WARRANTY INT,
  4  OPERATIONAL INT);

Table created.

SQL> _
```

INSERTING RECORDS IN EQUIPMENT DETAILS

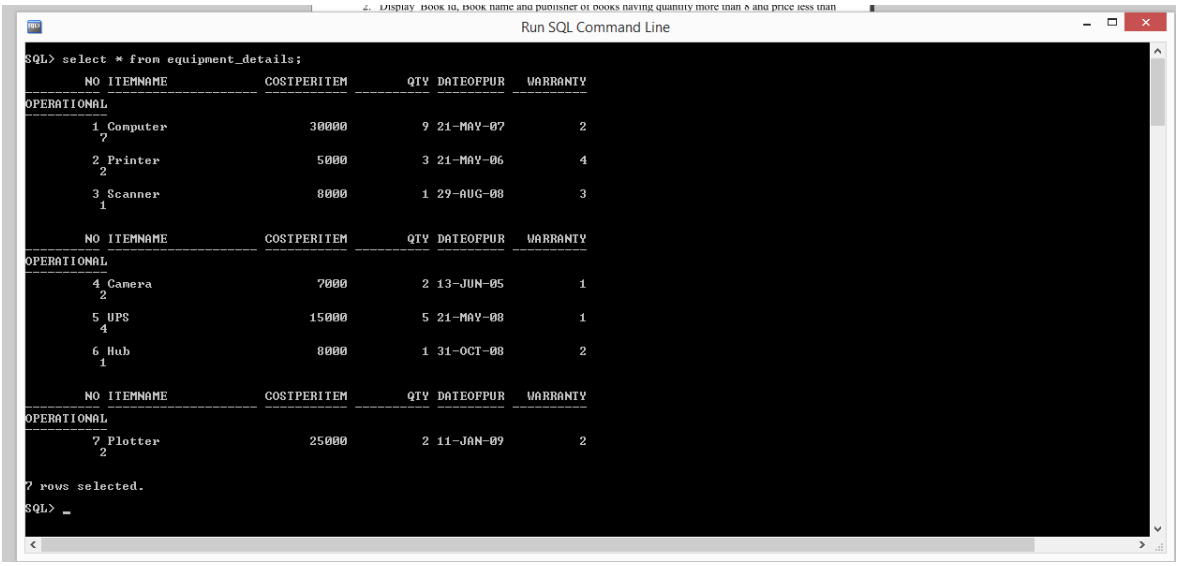
Run SQL Command Line

```
Enter value for itemname: Computer
Enter value for cost: 30000
Enter value for qty: 9
Enter value for date: 21-may-2007
Enter value for waranty: 2
Enter value for oper: 7
old   1: INSERT INTO EQUIPMENT_DETAILS VALUES(&NO,'&ITEMNAME',&COST,&QTY,'&DATE',&WARANTY,&OP
new   1: INSERT INTO EQUIPMENT_DETAILS VALUES(1,'Computer',30000,9,'21-may-2007',2,7)

1 row created.

SQL> _
```

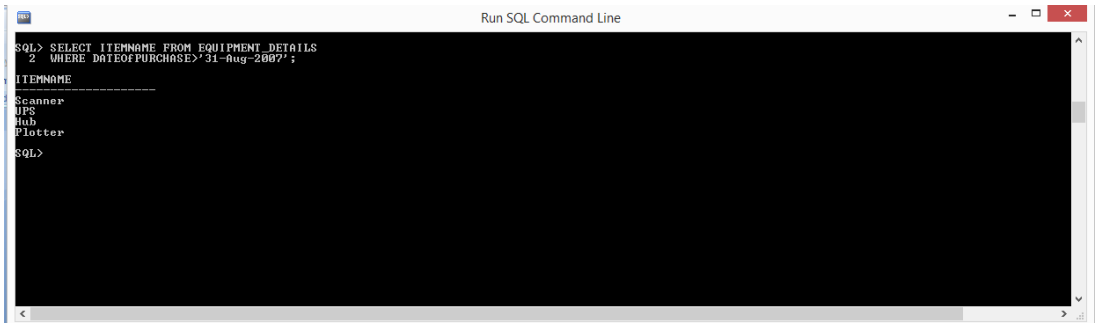
Create Following **table** and insert **tuples** with suitable constraints

AFTER INSERTING ALL RECORDS IN EQUIPMENT DETAILS TABLE

RECORDS IN TABLE ARE:

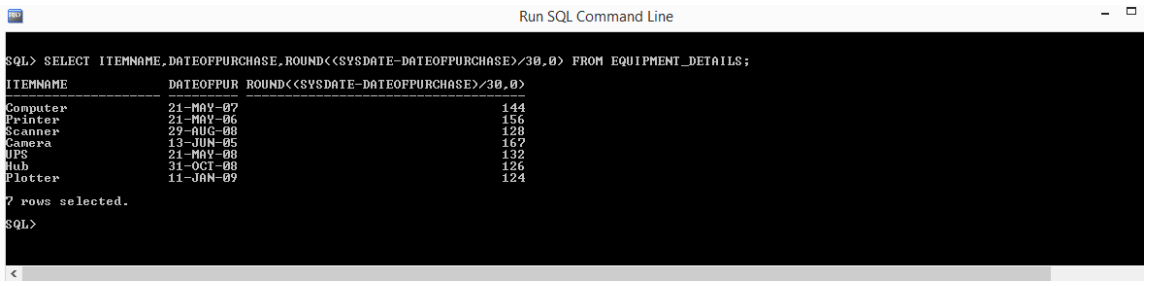


1. TO SELECT THE ITEMNAME PURCHASE AFTER 31/10/07

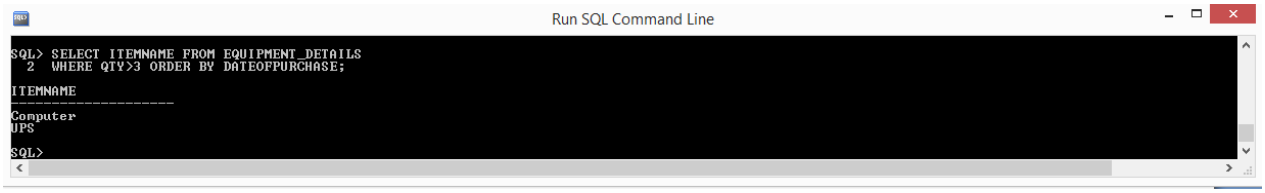


2. EXTEND THE WARRANTY OF EACH ITEM BY 6 MONTHS

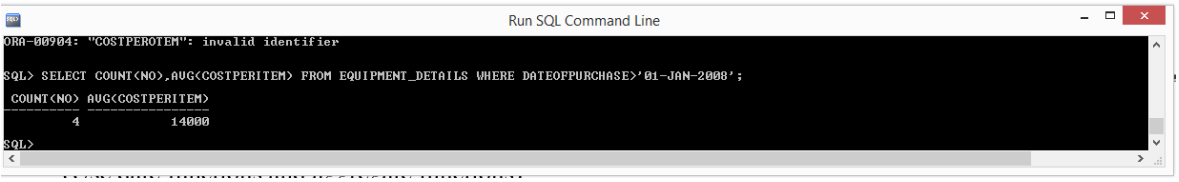
3. **DISPLAY ITEMNAME , DATEOF PURCHASE AND NUMBER OF MONTHS BETWEEN PURCHASE DATE AND PRESENT DATE**



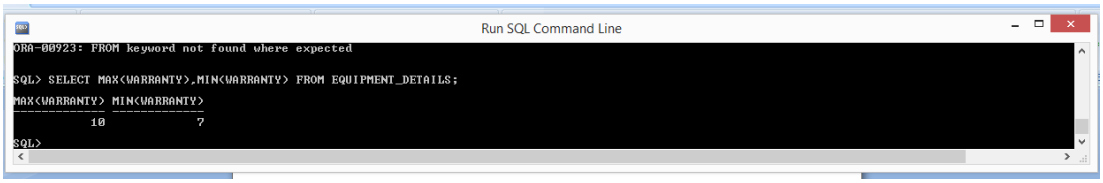
4. **TO LIST THE ITEMNAME IN ASCENDING ORDER OF THE DATE OF PURCHASE WHERE QUANTITY IS MORE THAN 3.**



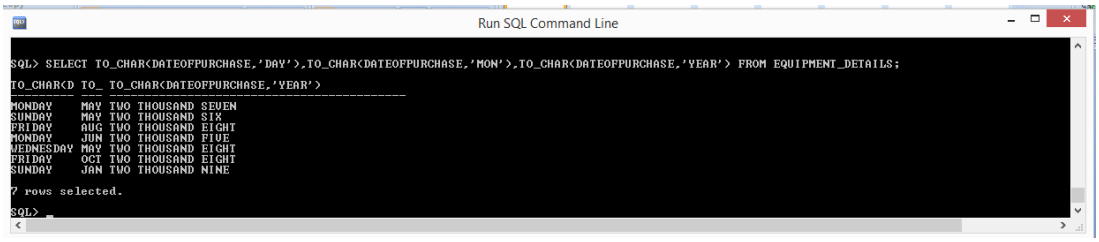
5. TO COUNT THE NUMBER, AVERAGE OF COSTPERITEM OF ITEMS PURCHASED BEFORE 1/1/08



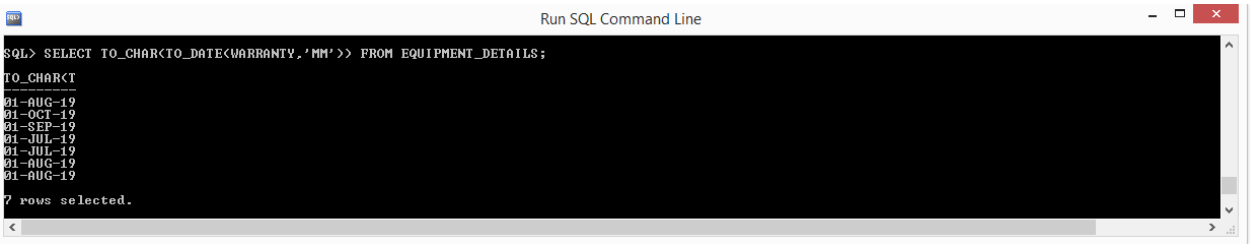
6. TO DISPLAY THE MINIMUM WARRANTY, MAXIMUM WARRANTY PERIOD



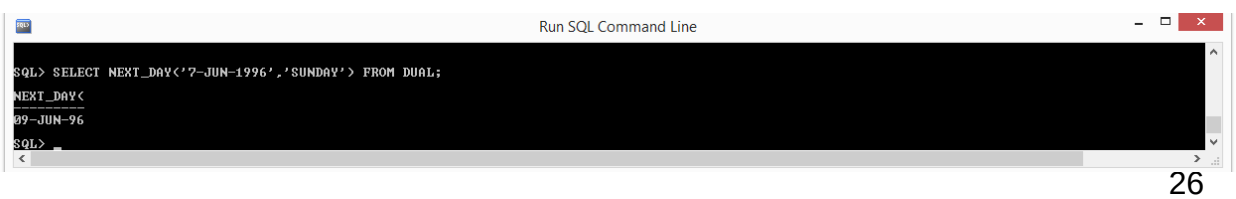
7. TO DISPLAY THE DAY OF THE DATE , MONTH , YEAR OF PURCHASE IN CHARACTERS.



8. TO ROUND OF THE WARRANTY PERIOD TO MONTH AND YEAR FORMAT.



9. TO DISPLAY THE NEXT SUNDAY FROM THE DATE '07-JUN-96'

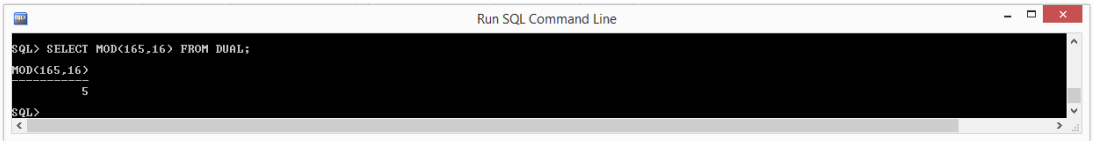


10. TO LIST THE ITEMNAME, WHICH ARE WITHIN THE WARRANTY PERIOD TILL PRESENT DATE

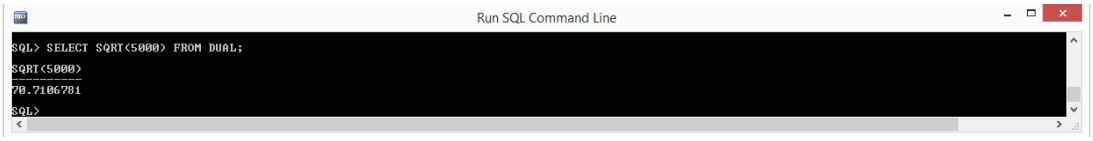
Activity 5: (Numeric, character functions)
Use Functions for the following

1. Find the mod of 165,16
2. Find Square Root of 5000
3. Truncate the value 128.3285 to 2 and -1 decimal places
4. Round the value 92.7683 to 2 and -1 decimal places
5. Convert the string _Department‘ to uppercase and lowercase
6. Display your address convert the first character of each word to uppercase and rest are in lowercase
7. Combine your first name and last name under the title Full name
8. A) Take a string length maximum of 15 display your name to the left. The remaining space should be filled with _*‘
9. Take a string length maximum of 20 display your name to the right. The remaining space should be filled with _#‘
10. Find the length of the string _JSS College, Mysore‘
11. Display substring _BASE‘ from _DATABASE‘
12. Display the position of the first occurrence of character _o‘ in Position and Length
13. Replace string Database with Datatype
14. Display the ASCII value of __(Space)
15. Display the Character equivalent of 42

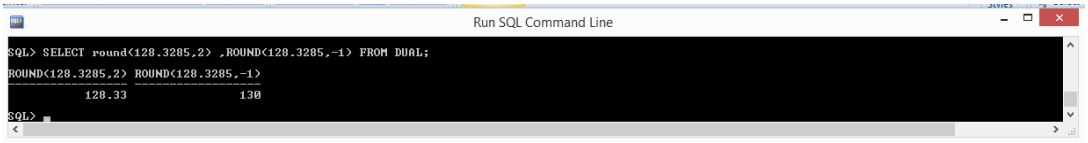
1. FIND THE MOD OF 165,16



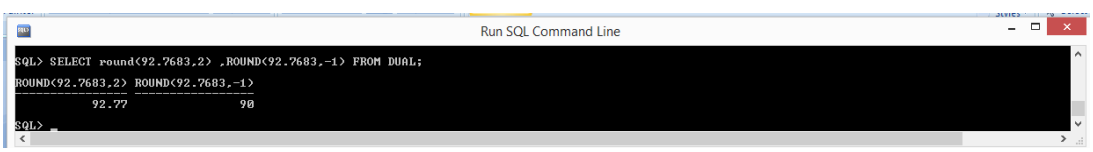
2. FIND SQUARE ROOT OF 5000



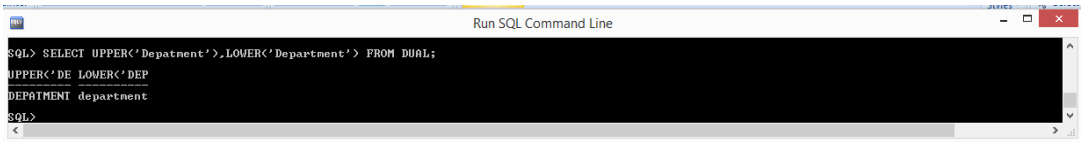
3. TRUNCATE THE VALUE 128.3285 TO 2 AND -1 DECIMAL PLACES



4. ROUND THE VALUE 92.7683 TO 2 AND -1 DECIMAL PLACES



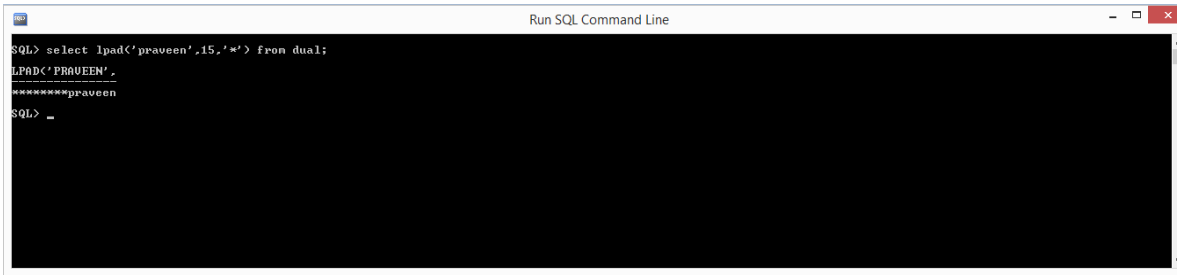
5. CONVERT THE STRING _DEPARTMENT‘ TO UPPERCASE AND LOWERCASE



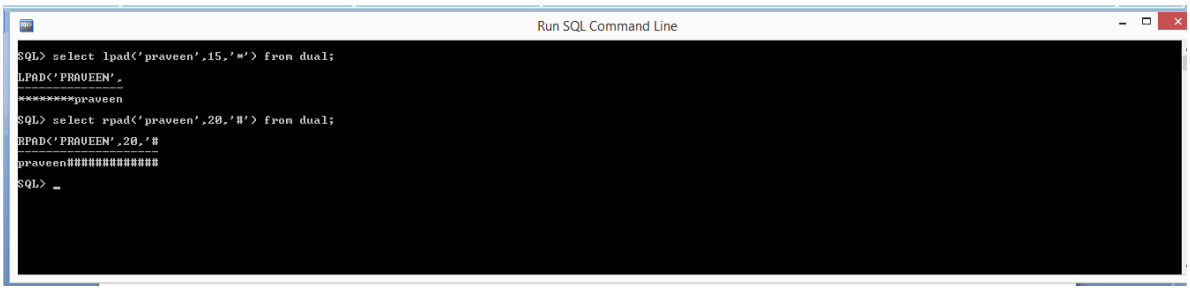
6. DISPLAY YOUR ADDRESS CONVERT THE FIRST CHARACTER OF EACH WORD TO UPPERCASE AND REST ARE IN LOWERCASE

7. COMBINE YOUR FIRST NAME AND LAST NAME UNDER THE TITLE FULL NAME

8. A) TAKE A STRING LENGTH MAXIMUM OF 15 DISPLAY YOUR NAME TO THE LEFT. THE REMAINING SPACE SHOULD BE FILLED WITH _*‘

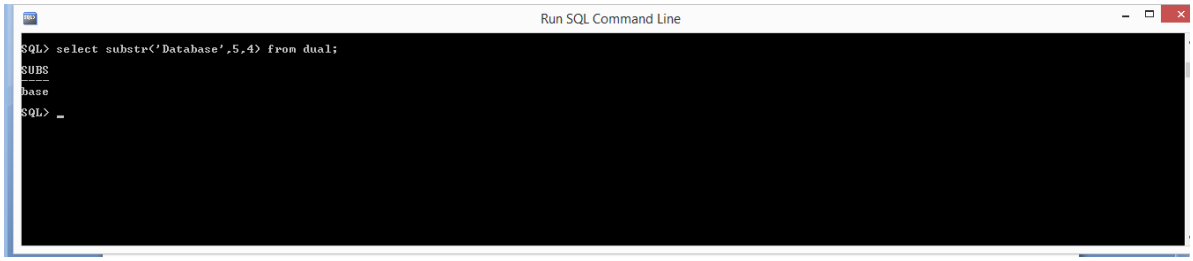


9. TAKE A STRING LENGTH MAXIMUM OF 20 DISPLAY YOUR NAME TO THE RIGHT. THE REMAINING SPACE SHOULD BE FILLED WITH _#‘

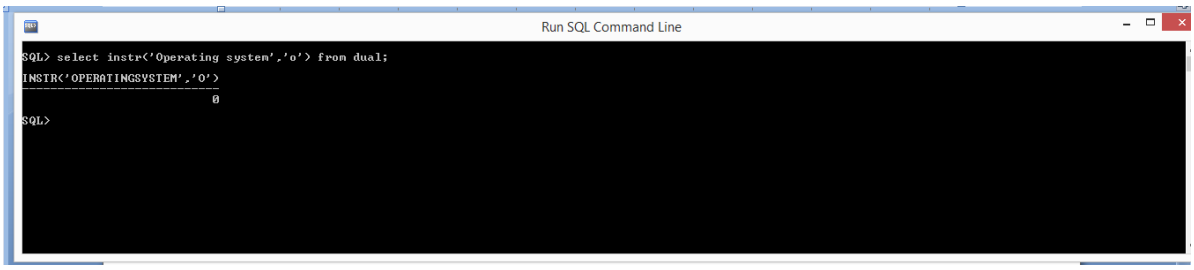


10. FIND THE LENGTH OF THE STRING _JSS COLLEGE, MYSORE‘

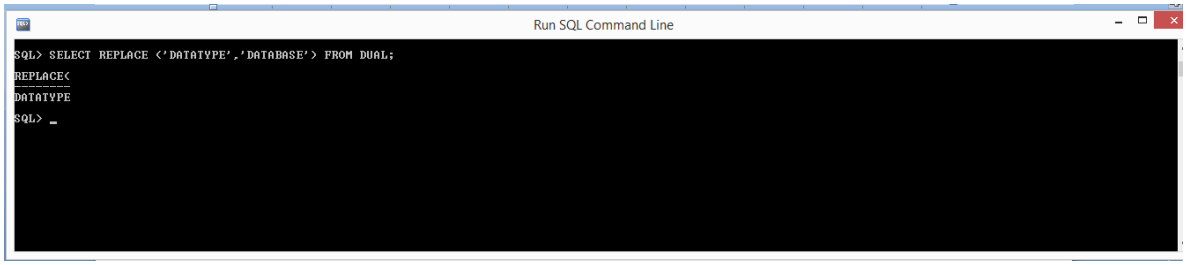
11. DISPLAY SUBSTRING _BASE‘ FROM _DATABASE‘



12. DISPLAY THE POSITION OF THE FIRST OCCURRENCE OF CHARACTER _O‘ IN POSITION AND LENGTH

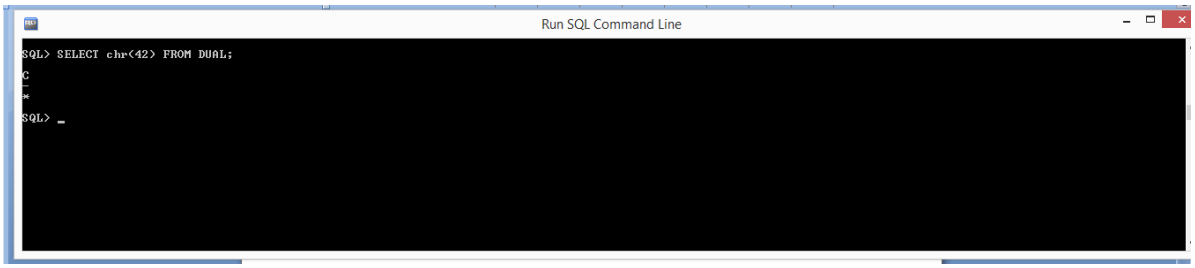


13. REPLACE STRING DATABASE WITH DATATYPE



14. DISPLAY THE ASCII VALUE OF _ _ (SPACE)

15. DISPLAY THE CHARACTER EQUIVALENT OF 42


Run SQL Command Line
SQL> SELECT chr(42) FROM DUAL;
C
-
*
SQL> _

Activity : 6 (set operators)
Database : subject
Create Following **table** and insert **tuples** with suitable constraints
Table - Physics

Regno	Name	Year	Combination
AJ00325	Ashwin	First	PCM
AJ00225	Swaroop	Second	PMCs
AJ00385	Sarika	Third	PME
AJ00388	Hamsa	First	PMCs

Table – Computer Science

Regno	Name	Year	Combination
AJ00225	Swaroop	Second	PMCs
AJ00296	Tajas	Second	BCA
AJ00112	Geetha	First	BCA
AJ00388	Hamsa	First	PMCs

1. Select all students from physics and Computer Science
2. Select student common in physics and Computer Science
3. Display all student details those are studying in second year
4. Display student those who are studying both physics and computer science in second year
5. Display the students studying only physics
6. Display the students studying only Computer Science
7. select all student having PMCs combination
8. select all student having BCA combination
9. select all student studying in Third year
10. Rename table Computer Science to CS

TABLE CREATION: PHYSICS TABLE

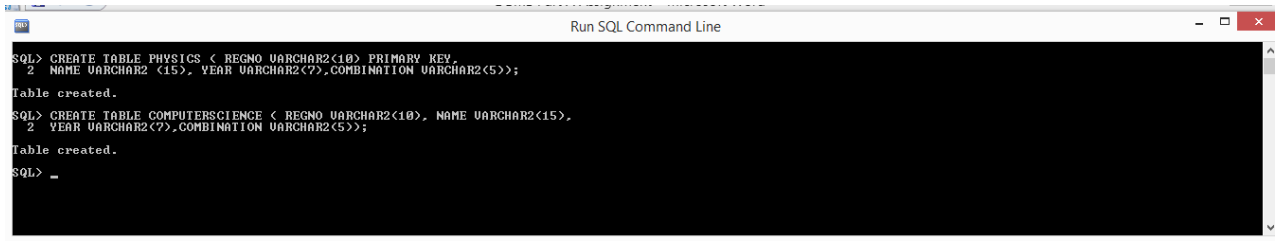
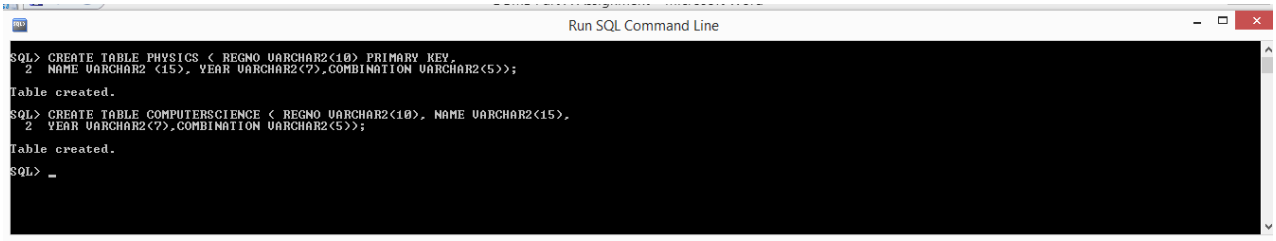
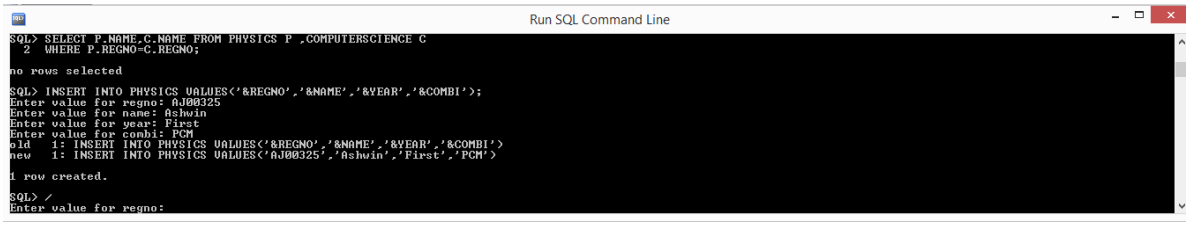


TABLE CREATION: COMPUTERSCIENCE TABLE

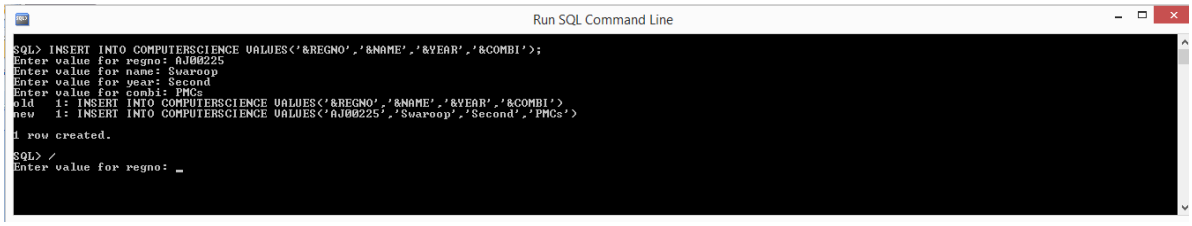


INSERTING RECORDS IN PHYSICS TABLE

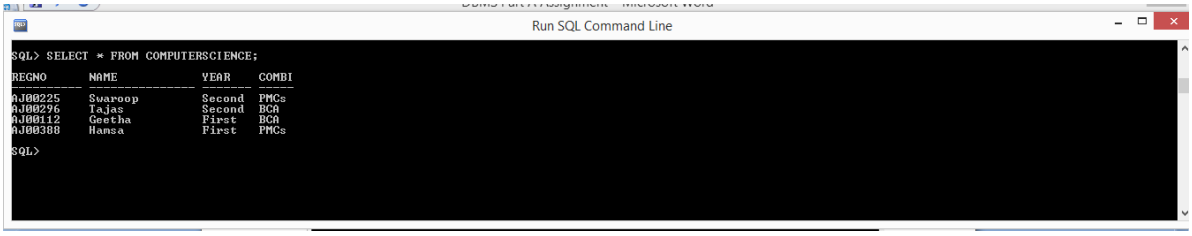


ALL RECORDS OF PHYSICS TABLE AFTER INSERTION

INSERTING RECORDS IN COMPUTER SCIENCE TABLE

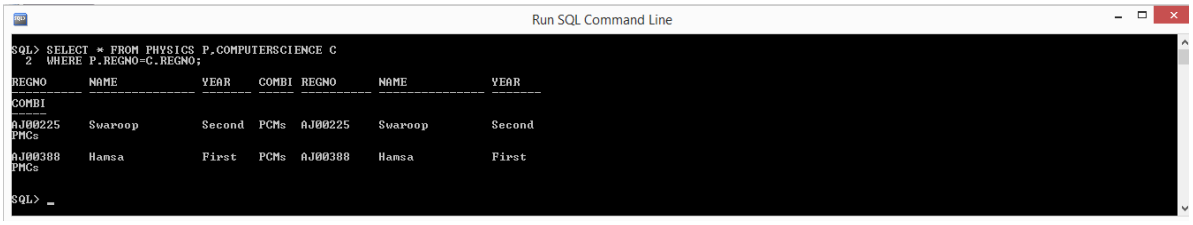


ALL RECORDS OF COMPUTERSCIENCE TABLE AFTER INSERTION

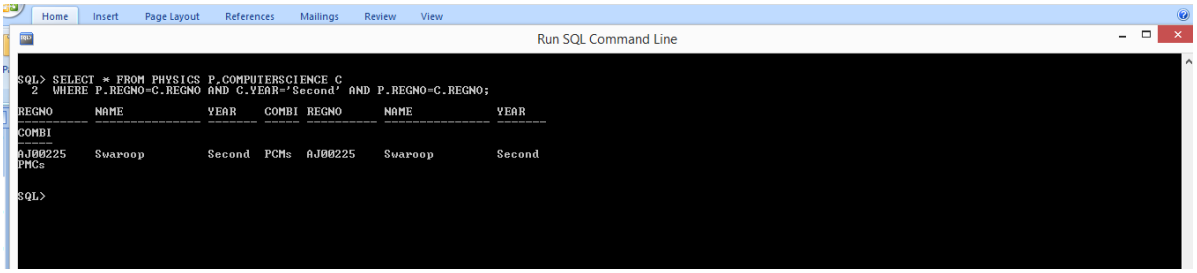


1. SELECT ALL STUDENTS FROM PHYSICS AND COMPUTER SCIENCE

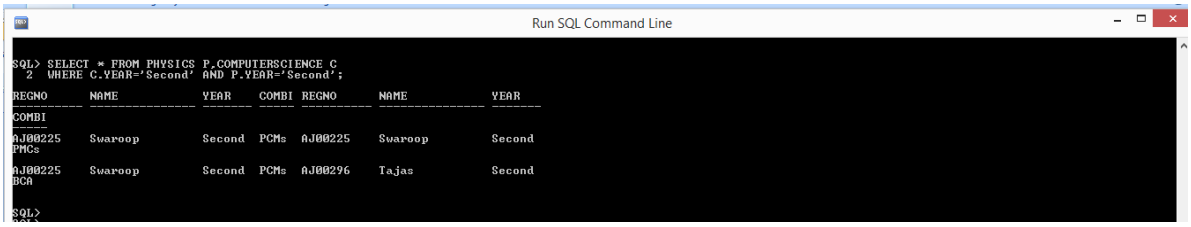
2. SELECT STUDENT COMMON IN PHYSICS AND COMPUTER SCIENCE



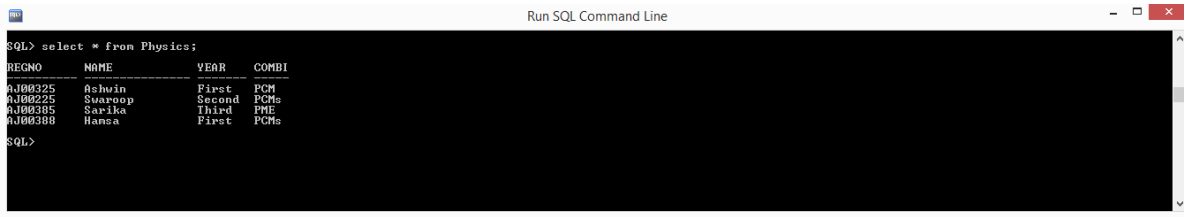
3. DISPLAY ALL STUDENT DETAILS THOSE ARE STUDYING IN SECOND YEAR



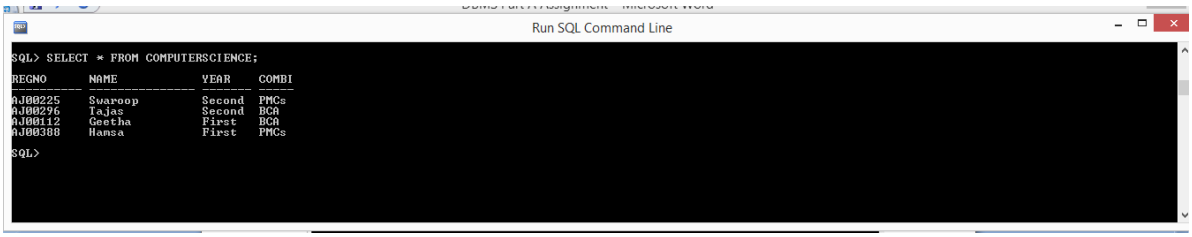
4. DISPLAY STUDENT THOSE WHO ARE STUDYING BOTH PHYSICS AND COMPUTER SCIENCE IN SECOND YEAR



5. DISPLAY THE STUDENTS STUDYING ONLY PHYSICS



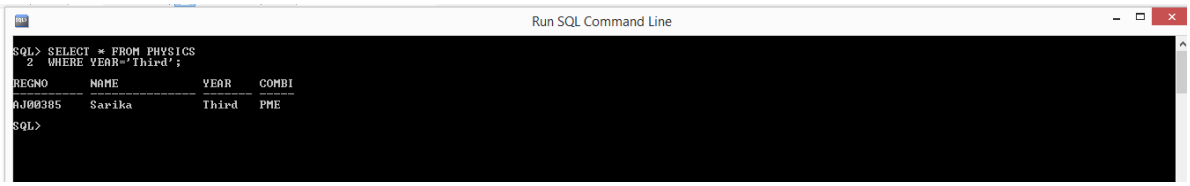
6. DISPLAY THE STUDENTS STUDYING ONLY COMPUTER SCIENCE



7. SELECT ALL STUDENT HAVING PMCS COMBINATION

8. SELECT ALL STUDENT HAVING BCA COMBINATION

9. SELECT ALL STUDENT STUDYING IN THIRD YEAR



10. RENAME TABLE COMPUTER SCIENCE TO CS

Activity 7: (views)
Database: Railway Reservation System
Create Following **table** and insert **tuples** with suitable constraints

Table: Train Details

Train_no	Train_name	Start_place	Destination
RJD16	Rajdhani Express	Bangalore	Mumbai
UDE04	Udhyan Express	Chennai	Hyderabad
KKE55	Karnataka Express	Bangalore	Chennai
CSE3	Shivaji Express	Coimbatore	Bangalore
JNS8	Janashatabdi	Bangalore	Salem

Table : Availability

Train_no	Class	Start_Place	Destination	No_of_seats
RJD16	Sleeper Class	Banglore	Mumbai	15
UDE04	First Class	Chennai	Hyderabad	22
KKE55	First Class AC	Bangalore	Chennai	15
CSE3	Second Class	Coimbatore	Bangalore	8
JNS8	Sleeper Class	Bangalore	Salem	18

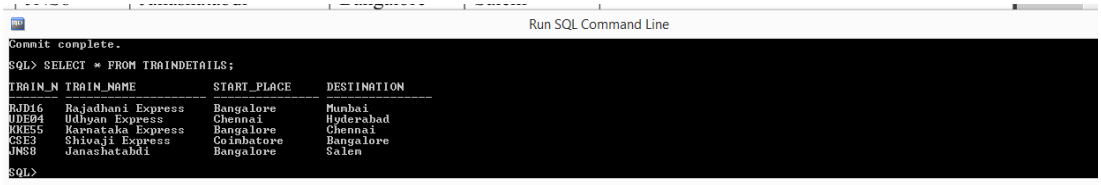
1. Create view **sleeper** to display train no, start place, destination which have sleeper class and perform the following
    a. insert new record
    b. update destination=‘Manglore‘ where train no=‘RJD16‘
    c. delete a record which have train no=‘KKE55‘
2. Create view **details** to display train no, train name, class
3. Create view **total_seats** to display train number, start place, use count function to no of seats , group by start place and perform the following
    a. insert new record
    b. update start place=‘Hubli‘ where train no=‘JNS8‘
    c. delete last row of the view
4. Rename view sleeper to class
5. Delete view details

TABLE CREATION: TRAINDETAILS

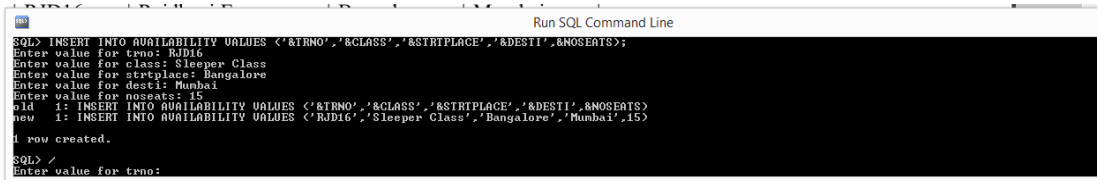
TABLE CREATION: AVAILABILITY

RECORD INSERTION : TRAINDETAILS TABLE

AFTER INSERTING ALL RECORDS IN TRAINDETAILS TABLE



INSERTING RECORDS IN AVAILABILITY TABLE



AFTER INSERTING ALL RECORDS IN AVAILABILITY TABLE

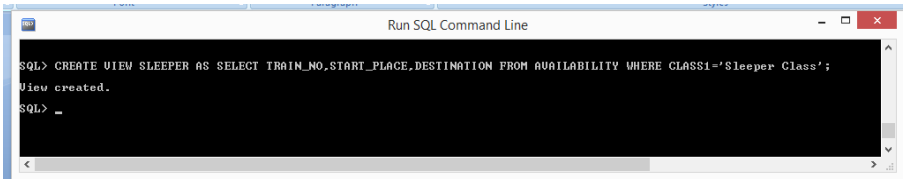
1. CREATE VIEW SLEEPER TO DISPLAY TRAIN NO, START PLACE, DESTINATION WHICH HAVE SLEEPER CLASS AND PERFORM THE FOLLOWING

A. INSERT NEW RECORD

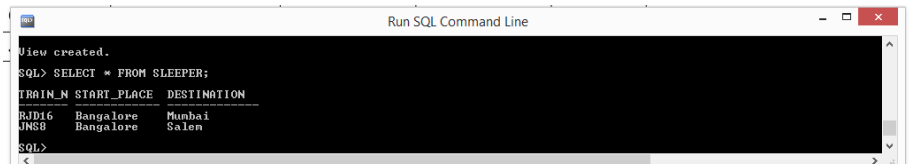
B. UPDATE DESTINATION=‘MANGLORE‘ WHERE TRAIN NO=‘RJD16‘

C. DELETE A RECORD WHICH HAVE TRAIN NO=‘KKE55‘

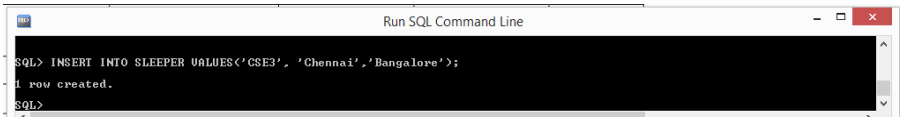
CREATING SLEEPER VIEW



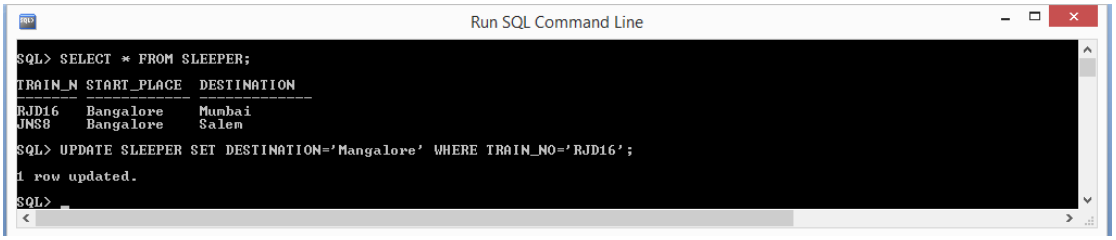
CONTENT OF SLEEPER VIEW



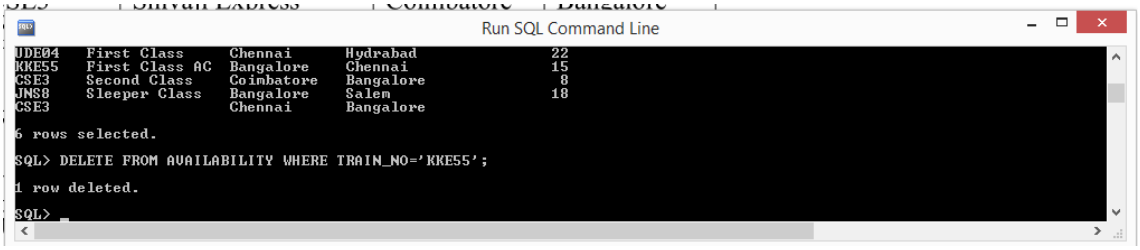
A. INSERT NEW RECORD



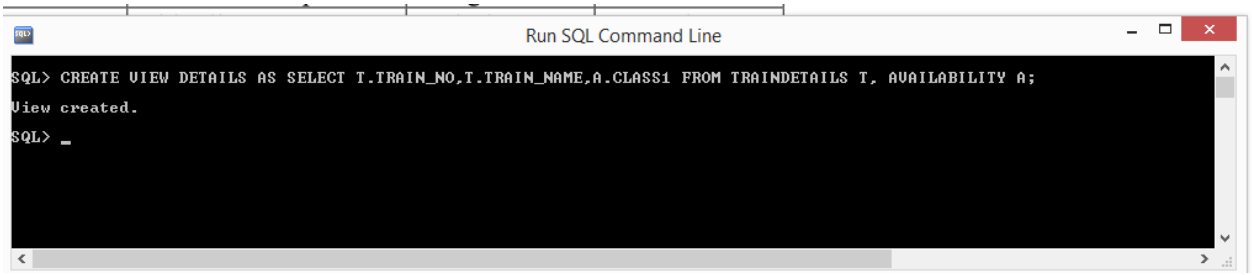
B. UPDATE DESTINATION='MANGLORE' WHERE TRAIN NO='RJD16'



C. DELETE A RECORD WHICH HAVE TRAIN NO='KKE55'



2. CREATE VIEW DETAILS TO DISPLAY TRAIN NO, TRAIN NAME, CLASS

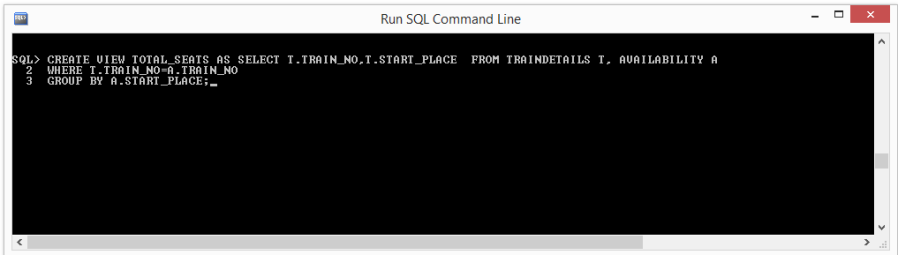


3. CREATE VIEW TOTAL_SEATS TO DISPLAY TRAIN NUMBER, START PLACE, USE COUNT FUNCTION TO NO OF SEATS , GROUP BY START PLACE AND PERFORM THE FOLLOWING

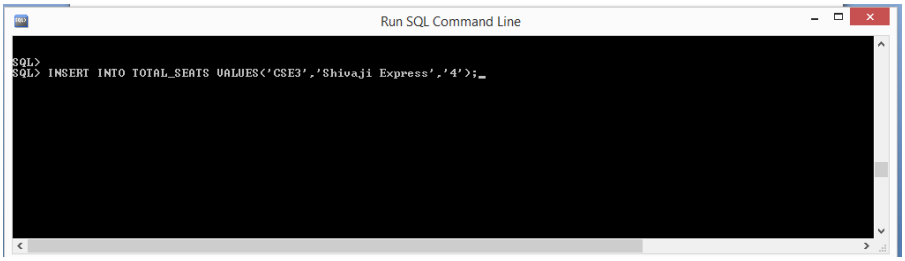
A. INSERT NEW RECORD

B. UPDATE START PLACE=‘HUBLI‘ WHERE TRAIN NO=‘JNS8‘

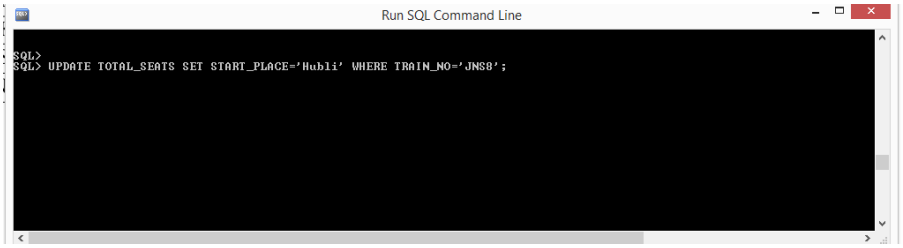
C. DELETE LAST ROW OF THE VIEW



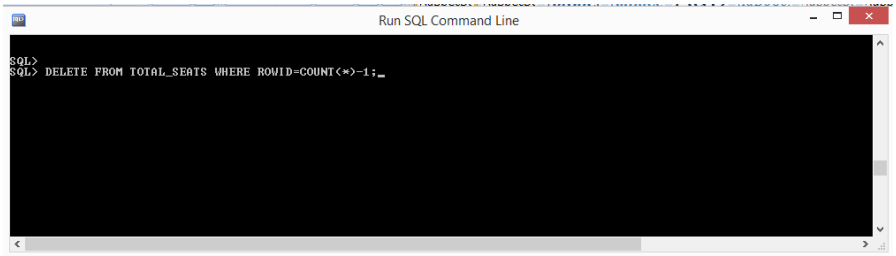
A. INSERT NEW RECORD



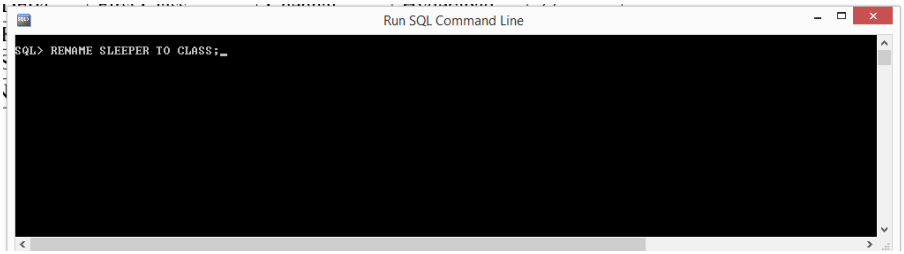
B. UPDATE START PLACE='HUBLI' WHERE TRAIN NO='JNS8'



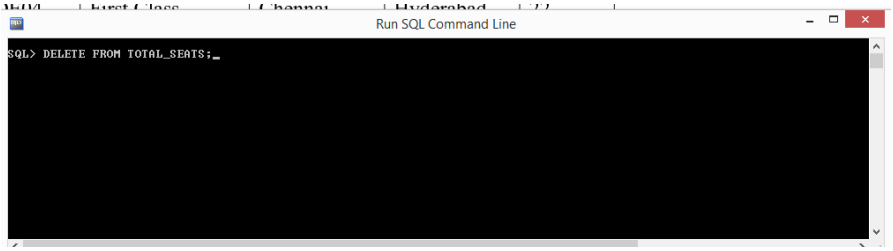
C. DELETE LAST ROW OF THE VIEW



4. RENAME VIEW SLEEPER TO CLASS

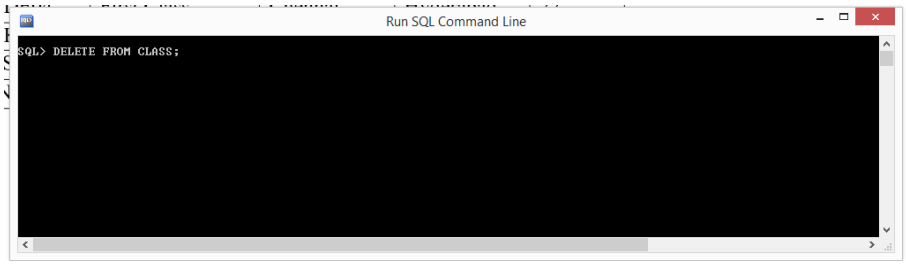


5. DELETE VIEW DETAILS



DELETING SLEEPER TABLE

NOTE: SINCE TABLE NAME HAS BEEN CHANGED TO CLASS SO TO DELETE SLEEPER TABLE WE HAVE TO DELETE CLASS TABLE.



WEEKLY ASSIGNMENT

PHYSICAL EDUCATION

Q.1. Which one of the following is not a component of wellness.

(a) Mental well being (b) Maximum strength

(c) Moral well being (d) Emotional well being

Q.2. Who was the first president of Indian Olympic association IOA?

(a) Sir Dorabji Tata (b) Jwahan Lal Nehru

(c) Sarder Patel (d) Mahatama Gandhi

Q.3. The 2020 Olympic aril be held in—

(a) Los Angleo (b) India

(c) Mexico (d) Tokyo

Q.4. The Ancient Olympic games user organised in he honour of—

(a) Heracules (b) Theondosis

(c) Posedon (d) Zues

Or

Who is known as the father of modern Olympic games

(a) Prof Jigaro kino (b) Sir Dorabji Tata

(c) Jacu Rogges (d) Perrie D Coubertin

Q.5. How many rings are their in Olympic flag—

(a) Three (b) Two

(c) Five (d) Four

Q.6. Which of the following is coordinatine obility—

(a) Sports announcer (b) Spots photo grapher

(c) Umpires (d) Sports Jour nalist

Q.7. Special Olympic Bharat started in—

(a) 2001 (b) 1948

(c) 1995 (d) 2005

Q.8. Deaf Olympic started in—

(a) 1960 (b) 1924

(c) 1947 (d) 2001

Q.9. The head ouartn of parolympic are situated in—

(a) Paris (b) New yrok

(c) Germany (d) Denmark

Q.10. 'Spirit in motion' is the motto of—

(a) Paralympic (b) Special Olympic

(c) Modern Olympic (d) Deaf lympic

Q.11. Inclusion is needed for—

(a) Hearing impaired (b) Loss of limb

(c) Blind people (d) All of these

Q.12. Which of the following in not a asana—

(a) Kapalbharti (b) Trikonasana

(c) Shashankasana (d) Naukasana

Or

Which of the following is adventure sports

(a) Trekking (b) Paragliding

(c) Surfing (d) All the above

Q.13. Find one word answers foot for the statement taise your heal, sland erect, taise your arms—

(a) Padmasana (b) Garudasana

(c) Tadasana (d) Shashankasana

Q.14. Which in not a quality of a good leader

(a) Autocratic (b) Dictator

(c) Both (d) Non of the above

Q.15. Who has a pear shape body

(a) Endomerph (b) Mesomerph

(c) Ectomorph (d) All the above

Q.16. Body weight = 50 kg, Height = 155 cm, find the Bm1

(a) 20.81 (b) 21.53

(c) 19.81 (d) 23.02

Or

BM1 of a person is 32, 50 he is...

(a) Over weight (b) Obesity grade-II

(c) Healthy (d) Under weight

Q.17. Ball and socket joint is situated at

(a) Shoulder (b) Wrist

(c) Neck (d) Knee

Q.18. A 19 year old boy fall in the catagery of

(a) Late childhood (b) Adoloscance

(c) Infancy (d) None of these

Q.19. Which of the following is not a sign of growth

(a) Increase in height (b) Increase in weight

(c) Increase in talking (d) Increased hair length

Q.20. Which is a method of warming up

(a) Sauna bath (b) Jogging

(c) Streching (d) All of them