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FREQUENTLY ASK QUESTIONS IN BOARD EXAMINATION (XII)

SUBJECT: COMPUTER SCIENCE WITH PYTHON

CHAPTER NAME: RELATIONAL DATABASE & MYSQL , INTERFACE PYTHON WITH SQL

1. Consider the following table named "Product", showing details of products being sold in a grocery shop.

PCode	PName	UPrice	Manufacturer
P01	Washing Powder	120	Surf
P02	Toothpaste	54	Colgate
P03	Soap	25	Lux
P04	Toothpaste	65	Pepsodent
P05	Soap	38	Dove
P06	Shampoo	245	Dove

   Write SQL queries for the following:
   a. Create the table Product with appropriate data types and constraints
   b. Identify the primary key in Product.
   c. List the Product Code, Product name and price in descending order of their product name. If PName is the same, then display the data in ascending order of price.
   d. Add a new column Discount to the table Product.
   e. Calculate the value of the discount in the table Product as 10 per cent of the UPrice for all those products where the UPrice is more than 100, otherwise the discount will be 0.
   f. Increase the price by 12 per cent for all the products manufactured by Dove.
   g. Display the total number of products manufactured by each manufacturer.
2. Consider the above mentioned table named "Product" and write the output(s) produced by executing the following queries on the basis of the information given above in the table Product:
   a. SELECT PName, avg(UPrice) FROM Product GROUP BY Pname;
   b. SELECT DISTINCT Manufacturer FROM Product;
   c. SELECT COUNT (DISTINCT PName) FROM Product;
   d. SELECT PName, MAX(UPrice), MIN(UPrice) FROM Product GROUP BY PName;
   e. SELECT * FROM PRODUCT ORDER BY UPRICE;

3. Answer the following questions:
   a. Define RDBMS. Name any two RDBMS software.
   b. What is the purpose of the following clauses in a select statement?
      i) ORDER BY   ii) GROUP BY
   c. Differentiate between DDL and DML statements.
   d. Explain the Primary Key, Candidate key, Foreign Key and Alternate Key.
   e. What do you understand by Cartesian Product?
4. Consider the following MOVIE table and write the SQL queries based on it.

MovieID	MovieName	Category	ReleaseDate	ProductionCost	BusinessCost
001	Hindi_Movie	Musical	2018-04-23	124500	130000
002	Tamil_Movie	Action	2016-05-17	112000	118000
003	English_Movie	Horror	2017-08-06	245000	360000
004	Bengali_Movie	Adventure	2017-01-04	72000	100000
005	Telugu_Movie	Action	-	100000	-
006	Punjabi_Movie	Comedy	-	30500	-

   a. Display all the information from the Movie table.
   b. List business done by the movies showing only MovieID, MovieName and Total_Earning. Total_ Earning to be calculated as the sum of ProductionCost and BusinessCost.
   c. List the different categories of movies.
   d. Find the net profit of each movie showing its MovieID, MovieName and NetProfit. Net Profit is to be calculated as the difference between Business Cost and Production Cost.
   e. List MovieID, MovieName and Cost for all movies with ProductionCost greater than 10,000 and less than 1,00,000.
   f. List details of all movies which fall in the category of comedy or action.
   g. List details of all movies which have not been released yet.
5. Using the sports database containing two relations (TEAM, MATCH_DETAILS) and write the queries for the following:
   a. Display the MatchID of all those matches where both the teams have scored more than 70.
   b. Display the MatchID of all those matches where FirstTeam has scored less than 70 but SecondTeam has scored more than 70.
   c. Display the MatchID and date of matches played by Team 1 and won by it.
   d. Display the MatchID of matches played by Team 2 and not won by it.
   e. Change the name of the relation TEAM to T_DATA. Also change the attributes TeamID and TeamName to T_ID and T_NAME respectively.
6. Define the various SQL constraints.
7. Explain various read operation like fetchone(), fetchmany() and fetchall().
8. Write a python program to create a Table 'student' inside the database 'school' using python script mode as the interface.
9. Write a python program to insert multiple records into the table student through Python Shell.
10. Write a python program to display all the records of student using Python Shell.
11. Consider the table Personal given below:

P_ID	Name	Desig	Salary	Allowance
P01	Rohit	Manager	89000	4800
P02	Kashish	Clerk	NULL	1600
P03	Mahesh	Superviser	48000	NULL
P04	Salil	Clerk	31000	1900
P05	Ravina	Superviser	NULL	2100

Based on the given table, write SQL queries for the following:

(i)   Increase the salary by 5% of personals whose allowance is known.
(ii)   Display Name and Total Salary (sum of Salary and Allowance) of all personals. The column heading 'Total Salary' should also be displayed.
(iii)   Delete the record of personals who have salary greater than 25000

12. Consider the tables PRODUCT and BRAND given below:
    Table: PRODUCT

PCode	PName	UPrice	Rating	BID
P01	Keyboard	120	6	M03
P02	Mouse	150	8	M02
P03	Pen Drive	200	7	M03
P04	Mouse	170	4	M04
P05	Pen Drive	250	5	M05
P06	Keyboard	200	6	M05

Table: BRAND

BID	BNAME
M02	ZEBRONICS
M03	HP
M04	LENOVA
M05	DELL

Write SQL queries for the following:
(i)   Display product name and brand name from the tables PRODUCT and BRAND.
(ii)   Display the structure of the table PRODUCT.
(iii)   Display the average rating of HP and DELL brands
(iv)   Display the name, price, and rating of products in descending order of rating.