



# INDIAN SCHOOL NIZWA

## INFORMATICS PRACTICES

### Chapter 5 MySQL Revision Tour -- Worksheet

CLASS XII

1 Consider the following records in 'Cars' table and answer the given questions: 3

CarID	Make	Model	Year	Color	Price
101	Toyota	Camry	2022	Blue	25000.00
102	Honda	Civic	2021	Black	22000.00
103	Ford	Mustang	2023	Brown	35000.00
104	Chevrolet	Equinox	2022	White	28000.00
105	BMW	X5	2023	Blue	45000.00
106	Volkswagen	Golf	2021	Black	20000.00

a. Write SQL query that will give the output as:  
 Blue  
 Black  
 Brown

b. Write command for the following:  
 To change the color of Model with code as 103 to 'Green'.

c. What is the cardinality of cars table?  
 Also identify the most suitable column of the cars table to mark as primary key column.

a. SELECT distinct Color FROM Cars WHERE Color like "B%";  
 b. UPDATE Cars SET Color = 'Green' WHERE CarID = 103;  
 c. Number of tuples: 6  
 Primary key column: CarID

2 3

CarID	Make	Model	Year	Color	Price
101	Toyota	Camry	2022	Blue	25000.00
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104	Chevrolet	Equinox	2022	White	28000.00
105	BMW	X5	2023	Blue	45000.00
106	Volkswagen	Golf	2021	Black	20000.00

Based on the above table Cars, Write the output of the following queries:

a. SELECT Make, Model FROM Cars WHERE Price > 30000.00;  
 b. SELECT COUNT(\*) AS 'TotalCars' FROM Cars WHERE Year = 2022;  
 c. SELECT CarID, Make, Model FROM Cars where price<22000;

a.

Make	Model
Ford	Mustang
BMW	X5

b.

TotalCars

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2

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c.

CarID	Make	Model
106	Volkswagon	Golf

3	<p>Suppose you already have "Nutrients" table in the "FOOD" database, as described below:  Table Name: Nutrients  Column Name: Food_Item (VARCHAR)  Column Name: Calorie (INT)  Write SQL statements to perform the following tasks:  i. Add a new column named "Plan_Start_Date" (Date) to the "Nutrients" table.  ii. ii. Modify the "Calorie" column to change its data type to Float.</p>	3																																				
	<p>i: ALTER TABLE Nutrients ADD Plan_Start_Date DATE;  ii: ALTER TABLE Nutrients MODIFY Calorie FLOAT;  (1.5 marks for each)</p>																																					
4	<p>Write MySQL statements for the following:  i. To create a database named FOOD.  ii. To create a table named Nutrients based on the following specification:</p> <table border="1" data-bbox="277 604 803 703"> <thead> <tr> <th>Column Name</th> <th>Data Type</th> <th>Constraints</th> </tr> </thead> <tbody> <tr> <td>Food_Item</td> <td>Varchar(20)</td> <td>Primary Key</td> </tr> <tr> <td>Calorie</td> <td>Integer</td> <td></td> </tr> </tbody> </table>	Column Name	Data Type	Constraints	Food_Item	Varchar(20)	Primary Key	Calorie	Integer		3																											
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	<p>i. CREATE DATABASE FOOD;  ii. CREATE TABLE NUTRIENTS(Food_Item VARCHAR(20) PRIMARY KEY,CALORIES INTEGER);</p>																																					
5	<p>Consider the table Library</p> <table border="1" data-bbox="266 852 1269 1087"> <thead> <tr> <th>Bookno</th> <th>Bname</th> <th>Author</th> <th>Category</th> <th>DoP</th> <th>price</th> </tr> </thead> <tbody> <tr> <td>111</td> <td>Harry Potter</td> <td>J K Rowling</td> <td>Fiction</td> <td>2000-07-02</td> <td>200.00</td> </tr> <tr> <td>123</td> <td>Alice in Wonderland</td> <td>Lewis Carol</td> <td>Comedy</td> <td>1985-10-10</td> <td>250.00</td> </tr> <tr> <td>128</td> <td>Computer Science</td> <td>Sumitha Arora</td> <td>Education</td> <td>2006-05-01</td> <td>400.00</td> </tr> <tr> <td>133</td> <td>Informatics Practices</td> <td>Sumitha Arora</td> <td>Education</td> <td>2010-06-01</td> <td>300.00</td> </tr> <tr> <td>135</td> <td>Naughty Girl</td> <td>Enid Blyton</td> <td>Classic</td> <td>2006-06-01</td> <td>250.00</td> </tr> </tbody> </table> <p>Write SQL queries for the following:  i. Display the names of the books of category comedy and education.  ii. Display the details of the books in the ascending order of price.  iii. Display the details of the books purchased in the year 2006.  iv. Display the names of the books that starts with the letter "A".</p>	Bookno	Bname	Author	Category	DoP	price	111	Harry Potter	J K Rowling	Fiction	2000-07-02	200.00	123	Alice in Wonderland	Lewis Carol	Comedy	1985-10-10	250.00	128	Computer Science	Sumitha Arora	Education	2006-05-01	400.00	133	Informatics Practices	Sumitha Arora	Education	2010-06-01	300.00	135	Naughty Girl	Enid Blyton	Classic	2006-06-01	250.00	4
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	<p>SELECT Bname FROM Library WHERE Category="Comedy" OR Category="Education";  SELECT * FROM Library ORDER BY Price;  SELECT * FROM Library WHERE YEAR(DoP)=2006;  SELECT Bname FROM Library WHERE Bname LIKE "A%";</p>																																					
6	<p>Imagine you are assigned a task to manage the inventory of an online store. The store uses an SQL database to track product information in a table named 'Products.' The 'Products' table has columns for 'ProductID' (Primary Key), 'ProductName', 'Category', 'QuantityInStock,' and 'PricePerUnit.'  The following scenarios represent different inventory management tasks:  i) Restocking: Due to a recent sale, the 'QuantityInStock' of a product with 'ProductID' 101, named "Laptop," needs to be increased by 10 units.  ii) Product Availability Check: You need to check the availability of a product named "Wireless Mouse" in the 'Electronics' category.  iii) Product Update: The price of all products in the 'Electronics' category should be increased by 5% to account for market changes.  iv) Out of Stock: Identify and list the products that are currently out of stock (QuantityInStock is 0).  For each scenario, provide the SQL statements to perform the necessary action.</p>	4																																				

i) UPDATE Products SET QuantityInStock = QuantityInStock + 10  
WHERE ProductID = 101;  
ii) SELECT \* FROM Products WHERE ProductName = 'Wireless Mouse'  
AND Category = 'Electronics';  
iii) UPDATE Products SET PricePerUnit = PricePerUnit \* 1.05 WHERE  
Category = 'Electronics';  
iv) SELECT ProductName FROM Products WHERE QuantityInStock = 0;  
(1 mark for each part answered correctly)

7 Kabir has created following table named exam:

RegNo	Name	Subject	Marks
1	Sanya	Computer Science	98
2	Sanchay	IP	100
3	Vinesh	CS	90
4	Sneha	IP	99
5	Akshita	IP	100

Help him in writing SQL queries to the perform the following task:  
i. Insert a new record in the table having following values: [6,'Khushi','CS',85]  
ii. To change the value "IP" to "Informatics Practices" in subject column.  
iii. To remove the records of those students whose marks are less than 30 .  
iv. To add a new column Grade of suitable datatype.  
v. To display records of "Informatics Practices" subject.

i.INSERT INTO EXAM VALUES(6,'Khushi','CS',85);  
ii. UPDATE EXAM SET subject="Informatics Practices" where subject ="IP";  
iii. DELETE FROM EXAM WHERE marks<30;  
iv. ALTER TABLE EXAM ADD COLUMN grade varchar(2);  
v. Select \* from exam where subject="Informatics Practices";  
(1 mark for each correct query)

8 Consider the table student:

Rollno	Name	Marks	Grade	Fees	Subject	DOB
1	Misthi	30	C	6000	Commerce	2008-01-12
2	Joseph	48	B	16000	Arts	2008-07-16
3	Yadav	66	A	4800	Science	2007-04-16
4	Tripthi	24	C	12500	Commerce	2007-06-26
5	Gupta	NULL	A	10500	Commerce	2008-06-06

Write SQL queries to perform the following operations:  
i. Display the first 3 characters of all names in uppercase.  
ii. Display the details of the students of commerce stream.  
iii. Display the details of those students who are born in the month of June.  
iv. Display the details of those students who pay fees between 10000 and 20000.  
v. Display the names of the students whose marks are not available.

SELECT UCASE(LEFT(Name,3)) FROM student;  
SELECT \* FROM Student WHERE stream="Commerce";  
SELECT \* FROM student WHERE monthname(DOB)="June";  
SELECT \* FROM student WHERE fees between 10000 and 20000;  
SELECT name FROM student WHERE mark is null;