**Problem Statement: 01**

Consider the following relations:

S (S#, SNAME, STATUS, CITY)

SP (S#, P, QTY)

P (P#, PNAME, COLOR, WEIGHT, CITY)

Give an expression in SQL for each of queries below:

1. Get supplier names for supplier who supply at least one red part

2. Get supplier names for supplier who do not supply part P2.

3. Construct a view for the above relations which has the information about suppliers and the parts they supply. The view contains the S#, SNAME, P# , PNAME renamed as SNO, NAME, PNO, PNAME.

**Problem Statement: 02**

Create a table SALES based on the table instance given below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| OrderID | OrderDate | Price | Quantity | CustomerName |
| 1 | 12/22/2005 | 160 | 2 | Smith |
| 2 | 08/10/2005 | 190 | 2 | Johnson |
| 3 | 07/13/2005 | 500 | 5 | Baldwin |
| 4 | 07/15/2005 | 420 | 2 | Smith |
| 5 | 12/22/2005 | 1000 | 4 | Wood |
| 6 | 10/2/2005 | 820 | 4 | Smith |
| 7 | 11/03/2005 | 2000 | 2 | Baldwin |

1. List out unique customers‟ name only from the table
2. List out name of the customers who have given order in the month of DECEMBER
3. Find out the total amount of money spent for each of the customers.
4. Select all unique customers, who have spent more than 1200 in the store
5. Select all customers that have ordered more than 5 items in total from all their orders.
6. Select all customers who have spent more than 1000, after 10/01/2005.
7. Select orders in increasing order of order price.
8. Select orders in decreasing order of order price
9. Count how many orders have made a customer with CustomerName of Smith.
10. Find number of unique customers that have ordered from the store.
11. Find out total no. of items ordered by all the customers.
12. Find out average number of items per order.
13. Find out the average OrderQuantity for all orders with OrderPrice greater than 200
14. Find out what was the minimum price paid for any of the orders.
15. Find out the highest OrderPrice from the given sales table

**Problem Statement: 03**

|  |
| --- |
| Create a Category table based on the table instance given below. Confirm the table is created. |
| Create a Toybrand table based on the table instance given below. Confirm the table is created |
| Create a Toys table based on the table instance given below. Confirm the table is created |
| Enforce the following Integrity rules while creating the Category Table.   * CategoryID should be the primary key * Category must be unique but not primary key. * Description of categories can allow storage of Null values. |
| Enforce the following Integrity rules while creating the ToyBrand   * The BrandID must be the primary key * BrandName must be 1)barbiee 2) Sports car 3) Brainvita. |
| Create index for toy table |
| Create view using toy table & toy brand table. |
| Alter the toy table to delete column Toy weight |

**Problem Statement: 03**

Create collection in mongoDB for university results of the students.

1. Insert at least 5 documents in it.
2. Update the total marks of exam seat no 30.
3. Remove the result data of the student having marks less than 40.
4. Display the documents in sorted order of marks.
5. Display the students having second class.
6. Demonstrate the use of skip and limit operation.
7. Display the number of students appeared for exam in computer department.
8. Find topper of mechanical department.
9. Display the students with minimum marks in each department.

**Problem Statement: 04**

Implement the two tier architecture Python/Java- mongoDB connectivity for Railway reservation system. Design appropriate database to manage collection with basic operation.

**Problem Statement: 05**

Implement the system using two tier architecture & java mysql connectivity for training & placement activity. Design appropriate database to manage database basic operations.

**Problem Statement: 06**

Consider the following relational schemas:

EMPLOYEE (EMPLOYEE\_NAME, STREET, CITY)

WORKS (EMPLOYEE\_NAME, COMPANYNAME, SALARY)

COMPANY (COMPANY\_NAME, CITY)

1. Find the names of all employees who work for ‘First Bank Corporation’.
2. Find the names and company names of all employees sorted in ascending order of company name and descending order of employee names of that company.
3. Change the city of First Bank Corporation to ‘New Delhi’
4. In Employee table retrieve the record whose city are same.

**Problem Statement: 07**

Consider the relations

EMP(ENO,ENAME,AGE,BASIC\_SALARY)

WORK\_IN(ENO,DNO)

DEPT(DNO,DNAME,CITY)

Express the following queries in SQL

1. Find names of employees who work in a deptt. in Delhi.
2. Get the deptt. number in which more than one employee is working.
3. Find name of employee who earns highest salary in ‘HR’ department.
4. Fetch records where deptno of employee is equal to dept no of dept.
5. Fetch records where deptno of employee whose dept no is between 10 to 20
6. Fetch the records from Emp table whose city in between DELHI,BANGALORE,PUNE..
7. In Employee table retrieve the record whose city are same.