# PRACTICAL LAB ASSIGNMENT: 1 (Required Lab Hours : 4)

1. **Create a relational database that contains the following tables and insert the following data into these tables.**

**STUD\_MEMBER**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Roll\_No*** | ***FName*** | ***MName*** | ***SName*** | ***Dept\_ID*** | ***Semester*** | ***Contact\_No*** | ***Gender*** |
| 1 | Ankur | Samir | Kahar | 1 | 1 | 272121 | M |
| 2 | Dhaval | Dhiren | Joshi | 1 | 1 | 232122 | M |
| 3 | Ankita | Biren | Shah | 1 | 1 | 112121 | F |
| 10 | Komal | Maheshkumar | Pandya | 2 | 3 | 123123 | F |
| 13 | Amit | Jitenkumar | Mehta | 3 | 3 | 453667 | M |
| 23 | Jinal | Ashish | Gandhi | 2 | 1 | 323232 | M |
| 22 | Ganesh | Asha | Patel | 2 | 3 | 124244 | M |
| 4 | Shweta | Mihir | Patel | 3 | 1 | 646342 | F |
| 7 | Pooja | Mayank | Desai | 3 | 3 | 328656 | F |
| 8 | Komal | Krishnaraj | Bhatia | 2 | 3 | 257422 | F |
| 43 | Kiran | Viraj | Shah | 1 | 1 | 754124 | F |

**DEPARTMENT**

|  |  |
| --- | --- |
| ***Dept\_ID*** | ***Dept\_Name*** |
| 1 | Information Technology |
| 2 | Electrical |
| 3 | Civil |
| 4 | Mechanical |
| 5 | Chemical |

1. **Now, solve the following SQL Queries.**

|  |  |
| --- | --- |
| 1. | Display the names and contact numbers of all student members. |
| 2. | Give the names and roll numbers of all students of Information Technology who are members. |
| 3. | Display names of Departments whose students are members. |
| 4. | Display names of Departments for which no students are members. |
| 5. | Display names of all Departments. |
| 6. | Find the number of students of Electrical Department who are members. |
| 7. | Display information of student members whose name begins with the letter “A”. |
| 8. | Display all details of Male members only. |
| 9. | Display data of student members who are currently in semester „3‟. |
| 10. | Display data of student female members in alphabetical order. |

# PRACTICAL LAB ASSIGNMENT (SQL): 2 (Required Lab Hours : 4)

**Table:** sales

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

**Solve following queries using Aggregate Function for above table:**

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

# PRACTICAL LAB ASSIGNMENT (SQL): 3 (Required Lab Hours : 6)

**Table:** sales

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **OrderID** | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | |  | | --- | | **OrderDate** | | 12/22/2005 | | 08/10/2005 | | 07/13/2005 | | 07/15/2005 | | 12/22/2005 | | 10/2/2005 | | 11/03/2005 | | 12/22/2002 | | 12/29/2004 | | |  | | --- | | **OrderPrice** | | 160 | | 190 | | 500 | | 420 | | 1000 | | 820 | | 2000 | | 1000 | | 5000 | | |  | | --- | | **OrderQuantity** | | 2 | | 2 | | 5 | | 2 | | 4 | | 4 | | 2 | | 4 | | 4 | | |  | | --- | | **CustomerName** | | Smith | | Johnson | | Baldwin | | Smith | | Wood | | Smith | | Baldwin | | Wood | | Smith | |

**Table:** products

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Product\_id** | **OrderId** | **Manufacture\_Date** | **Raw\_Material** | **Vender\_id** |
| AZ145 | 2 | 12/23/2005 | Steel | 1 |
| CS784 | 4 | 11/28/2005 | Plastic | 2 |
| AZ147 | 6 | 08/15/2002 | Steel | 3 |
| FD344 | 3 | 11/03/2005 | Milk | 1 |
| GR233 | 3 | 11/30/2005 | Pulses | 2 |
| FD123 | 2 | 10/03/2005 | Milk | 2 |
| CS783 | 1 | 11/03/2004 | Plastic | 2 |
| CS435 | 5 | 11/04/2001 | Steel | 1 |
| GR567 | 6 | 09/03/2005 | Pulses | 2 |
| FD267 | 5 | 21/03/2002 | Bread | 4 |
| FD333 | 9 | 12/12/2001 | Milk | 1 |

**Table:** vender\_info

|  |  |
| --- | --- |
| **Vender\_id** | **Vender\_name** |
| 1 | Smith |
| 2 | Wills |
| 3 | Johnson |
| 4 | Roger |

**Table:** venders

|  |  |  |
| --- | --- | --- |
| **Raw\_Material** | **Venders** | **Vender\_id** |
| Steel | Smith | 1 |
| Plastic | Wills | 2 |
| Steel | Johnson | 3 |
| Milk | Smith | 1 |
| Pulses | Wills | 2 |
| Bread | Roger | 4 |
| Bread | Wills | 2 |
| Milk | Wills | 2 |

1. Display product information which are ordered in the same year of its manufacturing year.
2. Display product information which are ordered in the same year of its manufacturing year where vender is „smith‟.
3. Display total no. of orders placed in each year.
4. Display total no. of orders placed in each year by vender Wills.
5. Display the name of all those persons who are venders and customers both.
6. Display total no. of food items ordered every year.
7. Display total no. of food items ordered every year made from Bread.
8. Display list of product\_id whose vender and customer is different.
9. Display all those customers who are ordering products of milk by smith.
10. Display total no. of orders by each vender every year.
11. Display name of those venders whose products are sold more than 2000 Rs. Every year.

# PRACTICAL LAB ASSIGNMENT (PL/SQL Exercise): 4 (Required Lab Hours : 6)

|  |  |
| --- | --- |
| 1. | Write a simple PL/SQL **script** that displays “Hello World”. |
| 2. | Write a PL/SQL **stored procedure** to display “Hello World”. |
| 3. | Write a PL/SQL script that performs simple arithmetic like Addition, Subtraction, Multiplication & Division of input numbers. |
| 4. | Create two tables as shown below:  Table 1 : product (product\_id, product\_name, supplier\_name, unit\_price)  Table 2: product\_price\_history(product\_id, product\_name, supplier\_name, unit\_price)    Insert appropriate data into Table 1 i.e. the „product‟ table.  Now write a **PL/SQL trigger** that automatically copies a row from product table to product\_price\_history table whenever the unit price of a product is changed in the product table. Note: „product‟ table contains new updated value of unit price while „product\_price\_history‟ table contains the old value. |
| 5. | Write a PL-SQL script to compare three given numbers and display them in ascending order. |
| 6. | Create the following table:  Emp(E\_ID, E\_Name, E\_Dept, E\_Salary)    Insert appropriate data into Emp table.  The attribute E\_Dept contains values like ( I.T. , Accounts, Sales)..  Write a **PL-SQL cursor** that increments the salary of employees of I.T. Dept. by 20%. |