IMB GRADED LAB 3

Name of Student: Akshita Khanna　　　　　　**SAP ID: 1000010864**

Creation Table:
   1. Customer:
        create table Customer

        (customer_id int(1),first_name varchar(10),last_name varchar(15),email varchar(25),address varchar(30),city varchar(15),state varchar(5),zipcode int);

insert into Customer

values(1,'George','Washington','gwashington@usa.gov','3200 Mt Vernon Hwy','Mount Vernon','VA',22121);

 insert into Customer

values(2,'John','Adams','jadams@usa.gov','1250 Hancock St','Quincy','MA',02169);

insert into Customer

values(3,'Thomas','Jefferson','tjefferson@usa.gov','931 Thomas Jefferson Pkwy','Charlottesville','VA',22902);

insert into Customer

values(4,'James','Madison','jmadison@usa.gov','11350 Constitution Hwy','Orange','VA',22960);

insert into Customer

values(5,'James','Monroe','jmonroe@usa.gov','2050 James Monroe Parkway','Charlottesville','VA',22902);

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Select * from Customer;

```
+-------------+------------+-----------+---------------------+----------------------------+-----------------+-------+---------+
| customer_id | first_name | last_name | email               | address                    | city            | state | zipcode |
+-------------+------------+-----------+---------------------+----------------------------+-----------------+-------+---------+
|           1 | George     | Washington| gwashington@usa.gov | 3200 Mt Vernon Hwy         | Mount Vernon    | VA    |   22121 |
|           2 | John       | Adams     | jadams@usa.gov      | 1250 Hancock St            | Quincy          | MA    |    2169 |
|           3 | Thomas     | Jefferson | tjefferson@usa.gov  | 931 Thomas Jefferson Pkwy  | Charlottesville | VA    |   22902 |
|           4 | James      | Madison   | jmadison@usa.gov    | 11350 Constitution Hwy     | Orange          | VA    |   22960 |
|           5 | James      | Monroe    | jmonroe@usa.gov     | 2050 James Monroe Parkway  | Charlottesville | VA    |   22902 |
+-------------+------------+-----------+---------------------+----------------------------+-----------------+-------+---------+
```

Order:

create table order
(order_id int(1),order_date date,amount varchar(10),customer_id int);

 insert into order
values(1,'1776/07/04','$234.56',1);

insert into order
 values(2,'1760/03/14','$78.50',3);

insert into order
values(3,'1784/05/23','$124.00',2);

insert into order
values(4,'1790/09/03','$65.50',3);

insert into order
values(5,'1795/07/21','$25.50',10);

insert into order
values(6,'1787/11/27','$14.40',9);

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Select * from Order;

```
+-----------+--------------+-----------+---------------+
| order_id  |  order_date  |  amount   |  customer_id  |
+-----------+--------------+-----------+---------------+
|         1 |  1776-07-04  |  $234.56  |             1 |
|         2 |  1760-03-14  |  $78.50   |             3 |
|         3 |  1784-05-23  |  $124.00  |             2 |
|         4 |  1790-09-03  |  $65.50   |             3 |
|         5 |  1795-07-21  |  $25.50   |            10 |
|         6 |  1787-11-27  |  $14.40   |             9 |
+-----------+--------------+-----------+---------------+
```

Queries:

1. **List of those customers who placed an order and the details of the order they placed and table should not display customer who have not placed any order.**

    select *
    from Customer
    natural join Order;

```
+-------------+------------+-----------+--------------------+-------------------------+----------------+-------+---------+----------+------------+----------+
| customer_id | first_name | last_name | email              | address                 | city           | state | zipcode | order_id | order_date | amount   |
+-------------+------------+-----------+--------------------+-------------------------+----------------+-------+---------+----------+------------+----------+
|           1 | George     | Washington| gwashington@usa.gov| 3200 Mt Vernon Hwy      | Mount Vernon   | VA    | 22121   |        1 | 1776-07-04 | $234.56  |
|           3 | Thomas     | Jefferson | tjefferson@usa.gov | 931 Thomas Jefferson Pkwy| Charlottesville| VA    | 22902   |        2 | 1760-03-14 | $78.50   |
|           2 | John       | Adams     | jadams@usa.gov     | 1250 Hancock St         | Quincy         | MA    | 2169    |        3 | 1784-05-23 | $124.00  |
|           3 | Thomas     | Jefferson | tjefferson@usa.gov | 931 Thomas Jefferson Pkwy| Charlottesville| VA    | 22902   |        4 | 1790-09-03 | $65.50   |
+-------------+------------+-----------+--------------------+-------------------------+----------------+-------+---------+----------+------------+----------+
```

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2. **List information about orders to our customers table, regardless of whether a customer placed an order or not.**
   select * from Customer
   left outer join Oder
   on Customer.customer_id=Oder.customer_id;

```
+-------------+------------+-----------+---------------------+------------------------+---------------+-------+---------+----------+------------+---------+-------------+
| customer_id | first_name | last_name | email               | address                | city          | state | zipcode | order_id | order_date | amount  | customer_id |
+-------------+------------+-----------+---------------------+------------------------+---------------+-------+---------+----------+------------+---------+-------------+
|           1 | George     | Washington| gwashington@usa.gov | 3200 Mt Vernon Hwy     | Mount Vernon  | VA    | 22121   |        1 | 1776-07-04 | $234.56 |           1 |
|           3 | Thomas     | Jefferson | tjefferson@usa.gov  | 931 Thomas Jefferson Pkwy | Charlottesville | VA | 22902 |        2 | 1760-03-14 | $78.50  |           3 |
|           2 | John       | Adams     | jadams@usa.gov      | 1250 Hancock St        | Quincy        | MA    | 2169    |        3 | 1784-05-23 | $124.00 |           2 |
|           3 | Thomas     | Jefferson | tjefferson@usa.gov  | 931 Thomas Jefferson Pkwy | Charlottesville | VA | 22902 |        4 | 1790-09-03 | $65.50  |           3 |
|           4 | James      | Madison   | jmadison@usa.gov    | 11350 Constitution Hwy | Orange        | VA    | 22960   |     NULL | NULL       | NULL    |        NULL |
|           5 | James      | Monroe    | jmonroe@usa.gov     | 2050 James Monroe Parkway | Charlottesville | VA | 22902 |     NULL | NULL       | NULL    |        NULL |
+-------------+------------+-----------+---------------------+------------------------+---------------+-------+---------+----------+------------+---------+-------------+
```

3. **List of all customers who have not placed an order.**
   select Customer.customer_id,first_name,last_name,email,address,city,state,zipcode
   from Customer
   where customer_id not in(select customer_id from Oder);

```
+-------------+------------+-----------+------------------+------------------------+----------------+-------+---------+
| customer_id | first_name | last_name | email            | address                | city           | state | zipcode |
+-------------+------------+-----------+------------------+------------------------+----------------+-------+---------+
|           4 | James      | Madison   | jmadison@usa.gov | 11350 Constitution Hwy | Orange         | VA    | 22960   |
|           5 | James      | Monroe    | jmonroe@usa.gov  | 2050 James Monroe Parkway | Charlottesville | VA | 22902   |
+-------------+------------+-----------+------------------+------------------------+----------------+-------+---------+
```

4. **Display total sum for each customer oders.**
   select Customer.customer_id,count(Oder.customer_id)
   from Customer
   left outer join Oder
   on Customer.customer_id=Oder.customer_id
   group by Customer.customer_id;

```
+-------------+------------------------+
| customer_id | count(Oder.customer_id)|
+-------------+------------------------+
|           1 |                      1 |
|           2 |                      1 |
|           3 |                      2 |
|           4 |                      0 |
|           5 |                      0 |
+-------------+------------------------+
```