SQL ASSIGMENT

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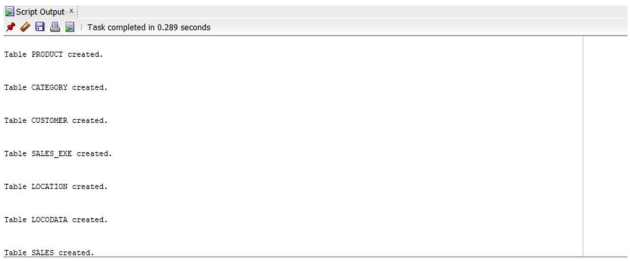
Software Used: Oracle SQL Developer

1. Create the Required tables for the Database:

```
-- Creating Tables
CREATE TABLE PRODUCT(
   P_ID INTEGER PRIMARY KEY,
   P_NAME VARCHAR(15),
   CAT_ID INTEGER,
   UNIT_PRICE FLOAT(5)
);

CREATE TABLE CATEGORY(
   CAT_ID INTEGER PRIMARY KEY,
   CAT_NAME VARCHAR(15)
);

CREATE TABLE CUSTOMER(
   C_ID INTEGER PRIMARY KEY,
   C_NAME VARCHAR(20),
   C_DOB DATE,
   C_GENDER CHAR(1),
   C_MOBILE VARCHAR(10),
   LOCO_ID INTEGER,
   CONSTRAINT CHECK_CUSTOMER_GENDER CHECK(C_GENDER IN ('M','F','O'))
);

CREATE TABLE SALES_EXE(
   SE_ID INTEGER,
   SE_NAME VARCHAR(20),
   SE_DOB DATE,
   SE_GENDER CHAR(1),
   SE_MOBILE VARCHAR(10),
   CONSTRAINT CHECK_SE_GENDER CHECK(SE_GENDER IN('M','F','O')),
   PRIMARY KEY(SE_ID)
);

CREATE TABLE LOCATION(
   LOCO_ID INTEGER PRIMARY KEY,
   LOCO_NAME VARCHAR(15)
);

CREATE TABLE LOCODATA(
   LOCO_ID INTEGER,
   SE_ID INTEGER,
   PRIMARY KEY(LOCO_ID,SE_ID)
);

CREATE TABLE SALES(
   C_ID INTEGER,
   P_ID INTEGER,
   SE_ID INTEGER,
   DOP DATE,
   NOU INT,
   PRIMARY KEY(C_ID, P_ID, DOP)
);
```

```
-- Updating Foreign keys to the tables
ALTER TABLE PRODUCT ADD FOREIGN KEY (CAT_ID) REFERENCES CATEGORY(CAT_ID);
ALTER TABLE CUSTOMER ADD FOREIGN KEY (LOCO_ID) REFERENCES LOCATION(LOCO_ID);
ALTER TABLE LOCODATA ADD FOREIGN KEY (SE_ID) REFERENCES SALES_EXE(SE_ID);
ALTER TABLE SALES ADD FOREIGN KEY (C_ID) REFERENCES CUSTOMER(C_ID);
ALTER TABLE SALES ADD FOREIGN KEY (P_ID) REFERENCES PRODUCT(P_ID);
ALTER TABLE SALES ADD FOREIGN KEY (SE_ID) REFERENCES SALES_EXE(SE_ID);
```

Screenshot:



2. Inserting records into the tables created:

```
-- Inserting Data into Database
INSERT INTO CATEGORY (CAT_ID,CAT_NAME) VALUES (1,'COMPUTERCOMP');
INSERT INTO CATEGORY (CAT_ID,CAT_NAME) VALUES (2,'PERIPHERALS');
INSERT INTO CATEGORY (CAT_ID,CAT_NAME) VALUES (3,'MISC');

INSERT INTO PRODUCT (P_ID,P_NAME,CAT_ID,UNIT_PRICE) VALUES (1,'MOTHERBOARD',1,1000);
INSERT INTO PRODUCT (P_ID,P_NAME,CAT_ID,UNIT_PRICE) VALUES (2,'CPU',1,2000);
INSERT INTO PRODUCT (P_ID,P_NAME,CAT_ID,UNIT_PRICE) VALUES (3,'MOUSE',2,500);
INSERT INTO PRODUCT (P_ID,P_NAME,CAT_ID,UNIT_PRICE) VALUES (4,'KEYBOARD',2,600);
INSERT INTO PRODUCT (P_ID,P_NAME,CAT_ID,UNIT_PRICE) VALUES (5,'MOUSEPAD',3,300);
INSERT INTO PRODUCT (P_ID,P_NAME,CAT_ID,UNIT_PRICE) VALUES (6,'HEADPHONES',3,800);

INSERT INTO LOCATION (LOCO_ID, LOCO_NAME) VALUES (1,'CHENNAI');
INSERT INTO LOCATION (LOCO_ID, LOCO_NAME) VALUES (2,'BANGALORE');

INSERT INTO CUSTOMER (C_ID, C_NAME, C_DOB, C_GENDER, C_MOBILE, LOCO_ID) VALUES (1,'RAJ','11-OCT-
1999','M',8939635828,1);
INSERT INTO CUSTOMER (C_ID, C_NAME, C_DOB, C_GENDER, C_MOBILE, LOCO_ID) VALUES (2,'KESAV','11-DEC-
1999','M',8939243448,2);
INSERT INTO CUSTOMER (C_ID, C_NAME, C_DOB, C_GENDER, C_MOBILE, LOCO_ID) VALUES (3,'FELITA','11-JAN-
1999','F',8932345828,1);

INSERT INTO SALES_EXE (SE_ID, SE_NAME, SE_DOB, SE_GENDER, SE_MOBILE) VALUES (1,'VENKI','11-OCT-
1999','M',8939635828);
INSERT INTO SALES_EXE (SE_ID, SE_NAME, SE_DOB, SE_GENDER, SE_MOBILE) VALUES (2,'RAM','14-FEB-
1979','M',8939635828);
INSERT INTO SALES_EXE (SE_ID, SE_NAME, SE_DOB, SE_GENDER, SE_MOBILE) VALUES (3,'GOPAL','11-MAR-
1999','O',8939635828);
INSERT INTO SALES_EXE (SE_ID, SE_NAME, SE_DOB, SE_GENDER, SE_MOBILE) VALUES (4,'MANI','14-FEB-
1998','M',8939635828);

INSERT INTO LOCODATA VALUES(1,1);
INSERT INTO LOCODATA VALUES(1,2);
INSERT INTO LOCODATA VALUES(2,3);
INSERT INTO LOCODATA VALUES(2,4);

INSERT INTO SALES VALUES(1,1,1,'10-01,2021',3);
INSERT INTO SALES VALUES(1,3,2,'08-01,2021',2);
INSERT INTO SALES VALUES(1,2,1,'01-01,2021',4);
INSERT INTO SALES VALUES(2,1,3,'10-01,2021',3);
```

```
INSERT INTO SALES VALUES(2,5,4,'08-01,2021',2);
INSERT INTO SALES VALUES(2,6,4,'01-01,2021',4);
INSERT INTO SALES VALUES(3,2,1,'10-01,2021',3);
INSERT INTO SALES VALUES(3,3,2,'08-01,2021',2);
INSERT INTO SALES VALUES(3,6,2,'01-01,2021',4);
```

Screenshot:

3. Executed the Queries

```
-- Query 1: Write a query to retrieve the most sold product per day in a specific location (take any location) in last week
CREATE VIEW LAST_WEEK_SALES AS SELECT * FROM SALES WHERE DOP BETWEEN to_date('03-01-2021','dd-mm-yyyy') and
to_date('10-01-2021','dd-mm-yyyy');

SELECT T.DOP AS Date_Of_Purchase, P.P_ID, P.P_NAME, max(ts) AS Max_Units from PRODUCT P
INNER JOIN
(SELECT sum(NOU) as ts, P_ID,DOP
            FROM LAST_WEEK_SALES S,CUSTOMER C
            WHERE C.LOCO_ID= 1
            AND C.C_ID=S.C_ID
  GROUP BY S.P_ID,S.DOP) T
ON T.P_ID=P.P_ID
GROUP BY T.DOP,P.P_ID, P.P_NAME
ORDER BY T.DOP;

--Query 2: Write a query to list all the sales persons details along with the count of products sold by them (if any) till current
date

SELECT SE.*, NVL(T.ps, 0) AS Products_Sold, NVL(T.nus, 0) AS Units_Sold FROM SALES_EXE SE
LEFT JOIN
(SELECT SE_ID, COUNT(DISTINCT P_ID) ps, SUM(NOU) AS nus FROM SALES GROUP BY SE_ID) T
ON T.SE_ID=SE.SE_ID;
```

Screenshot:

```
DATE_OF_       P_ID P_NAME           MAX_UNITS
-------- ---------- --------------- ----------
08-01-21          3 MOUSE                   4
10-01-21          1 MOTHERBOARD             3
10-01-21          2 CPU                     3


     SE_ID SE_NAME              SE_DOB   S SE_MOBILE  PRODUCTS_SOLD UNITS_SOLD
---------- -------------------- -------- - ---------- ------------- ----------
         1 VENKI                11-10-99 M 8939635828             2         10
         2 RAM                  14-02-79 M 8939635828             2          8
         4 MANI                 14-02-98 M 8939635828             2          6
         3 GOPAL                11-03-99 O 8939635828             1          3
```