SQL Concepts and Fundamentals

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Assignment

1. Assuming you are ready with ER Model (from Morning session Assignment), transform it into a Database schema. Create tables keeping up good practices and send me the create scripts you've written.

2. Write a query to retrieve the most sold product per day in a specific location (take any location) in last week.

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

Note : Along with the queries you've written, attach screenshots of the output for Q's 2 & 3.

Tables

Sales

TransactionId	SalesExecutiveId	CustomerId	ProductCode	LocationCode
101	801	901	13	500000
102	801	901	12	500000
103	802	901	11	500000
104	801	902	31	500000
105	802	903	32	500000
106	803	903	11	600000
107	804	903	33	600000
108	805	905	11	100000
109	805	905	22	100000
110	805	905	13	100000
111	805	905	32	100000
NULL	NULL	NULL	NULL	NULL

Location

LocationCode	LocationName
100000	Chennai
500000	Hyderabad
600000	Banglore
NULL	NULL

Customer

CustomerId	Name	DOB	mobile	gender
901	P	1998-06-17	6666666666	Male
902	Q	1999-07-18	7777777777	Male
903	R	2000-08-19	8888888888	Male
904	S	2001-09-20	9999999999	FeMale
905	T	2002-10-21	1234567890	FeMale
NULL	NULL	NULL	NULL	NULL

SalesExecution

SalesExecutiveId	Name	DOB	mobile	gender
801	A	1997-06-16	1111111111	Female
802	B	1996-05-15	2222222222	Female
803	C	1994-04-14	3333333333	Female
804	D	1993-03-13	4444444444	Male
805	E	1993-02-12	5555555555	Male
NULL	NULL	NULL	NULL	NULL

Purchase

TransactionId	DateOfPurchase	NoOfUnits
101	2021-01-08	3
102	2021-01-09	3
103	2021-01-10	2
104	2021-01-08	1
105	2021-01-09	2
106	2021-01-10	1
107	2021-01-08	2
108	2021-01-09	2
109	2021-01-10	1
110	2021-01-08	2
111	2021-01-09	2
NULL	NULL	NULL

Product

ProductCode	ProductName	UnitPrice	CategoryId
11	Laptop	40	1
12	Tab	25	1
13	Phone	20	1
21	Car	100	2
22	Bike	65	2
23	Jeep	140	2
31	Table	25	3
32	Chair	20	3
33	Bed	35	3
NULL	NULL	NULL	NULL

CategoryId	CategoryName
1	Electronics
2	Vehicle
3	Furniture
NULL	NULL

Category

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Schema Creation

```
##CREATE SCHEMA `hamensprivatelimited` ;
```

Tables Creation

```
create table Category
(
CategoryId int,
CategoryName varchar(20),
PRIMARY KEY (CategoryId)
);
create table Product
(
ProductCode int NOT NULL,
ProductName varchar(20),
UnitPrice int,
CategoryId int NOT NULL,
PRIMARY KEY (ProductCode),
FOREIGN KEY (CategoryId) REFERENCES Category(CategoryId)
);
create table Location
(
LocationCode int,
LocationName varchar(20),
PRIMARY KEY (LocationCode)

);
```


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```
create table SalesExecutive
(
SalesExecutiveId int,
Name varchar(20),
DOB date,
mobile bigint(10),
gender varchar(20),
PRIMARY KEY (SalesExecutiveId)
);
create table Customer
(
CustomerId int,
Name varchar(20),
DOB date,
mobile bigint(10),
gender varchar(20),
PRIMARY KEY (CustomerId)
);
create table Sales (
TransactionId int,
SalesExecutiveId int,
CustomerId int,
ProductCode int,
LocationCode int,
PRIMARY KEY (TransactionId) ,
FOREIGN KEY (SalesExecutiveId) REFERENCES SalesExecutive(SalesExecutiveId),
```


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```
    FOREIGN KEY (ProductCode) REFERENCES Product(ProductCode),

    FOREIGN KEY (CustomerId) REFERENCES Customer(CustomerId),

    FOREIGN KEY (LocationCode) REFERENCES Location(LocationCode)

    );

create table Purchase

    (

    TransactionId int,

    DateOfPurchase date,

    NoOfUnits int,

    PRIMARY KEY (TransactionId)

    );
```

Inserting Values

```
    insert into Customer (CustomerId, Name, DOB, Mobile, Gender) values (901,"P",'1998-06-17',6666666666,"Male");

    insert into Customer (CustomerId, Name, DOB, Mobile, Gender) values (902,"Q",'1999-07-18',7777777777,"Male");

    insert into Customer (CustomerId, Name, DOB, Mobile, Gender) values (903,"R",'2000-08-19',8888888888,"Male");

    insert into Customer (CustomerId, Name, DOB, Mobile, Gender) values (904,"S",'2001-09-20',9999999999,"FeMale");

    insert into Customer (CustomerId, Name, DOB, Mobile, Gender) values (905,"T",'2002-10-21',1234567890,"FeMale");

    insert into SalesExecutive (SalesExecutiveId, Name, DOB, Mobile, Gender) values (801,"A",'1997-06-16',1111111111,"Female");

    insert into SalesExecutive (SalesExecutiveId, Name, DOB, Mobile, Gender) values (802,"B",'1996-05-15',2222222222,"Female");

    insert into SalesExecutive (SalesExecutiveId, Name, DOB, Mobile, Gender) values (803,"C",'1994-04-14',3333333333,"Female");
```


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```
insert into SalesExecutive (SalesExecutiveId, Name, DOB, Mobile, Gender) values (804,"D",'1993-03-13',4444444444,"Male");

insert into SalesExecutive (SalesExecutiveId, Name, DOB, Mobile, Gender) values (805,"E",'1993-02-12',5555555555,"Male");


insert into Location (LocationCode, LocationName) values (500000,"Hyderabad");

insert into Location (LocationCode, LocationName) values (600000,"Banglore");

insert into Location (LocationCode, LocationName) values (100000,"Chennai");


insert into Category (CategoryId, CategoryName) values (1,"Electronics");

insert into Category (CategoryId, CategoryName) values (2,"Vehicle");

insert into Category (CategoryId, CategoryName) values (3,"Furniture");


insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (11,"Laptop", 40, 1);

insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (12,"Tab", 25, 1);

insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (13,"Phone", 20, 1);

insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (21,"Car", 100, 2);

insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (22,"Bike", 65, 2);

insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (23,"Jeep", 140, 2);

insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (31,"Table", 25, 3);

insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (32,"Chair", 20, 3);

insert into Product (ProductCode, ProductName, UnitPrice, CategoryId) values (33,"Bed", 35, 3);


insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (101,801,13,901,500000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (102,801,12,901,500000);
```


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```
insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (103,802,11,901,500000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (104,801,31,902,500000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (105,802,32,903,500000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (106,803,11,903,600000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (107,804,33,903,600000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (108,805,11,905,100000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (109,805,22,905,100000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (110,805,13,905,100000);

insert into Sales (TransactionId, SalesExecutiveId, ProductCode, CustomerId, LocationCode) values (111,805,32,905,100000);


insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (101,'2021-01-08',3);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (102,'2021-01-09',3);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (103,'2021-01-10',2);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (104,'2021-01-08',1);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (105,'2021-01-09',2);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (106,'2021-01-10',1);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (107,'2021-01-08',2);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (108,'2021-01-09',2);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (109,'2021-01-10',1);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (110,'2021-01-08',2);

insert into Purchase (TransactionId, DateOfPurchase, NoOfUnits) values (111,'2021-01-09',2);
```


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ANSWER 2

SQL Statements

```
create view Table1 as

select * from Purchase where TransactionId in (select TransactionId from Sales where
LocationCode = '500000');


create view Table2 as

select * from Table1 P1 INNER JOIN

(select DateOfPurchase as DOP, max(NoOfUnits) as MNU from Table1 group by
DateOfPurchase ) P2

on P1.DateOfPurchase = P2.DOP and P1.NoOfUnits =P2.MNU ;


create view Table3 as

select ProductCode from Sales where TransactionId in (select TransactionId from Table2);


select * from Product where ProductCode in (select ProductCode from Table3);
```


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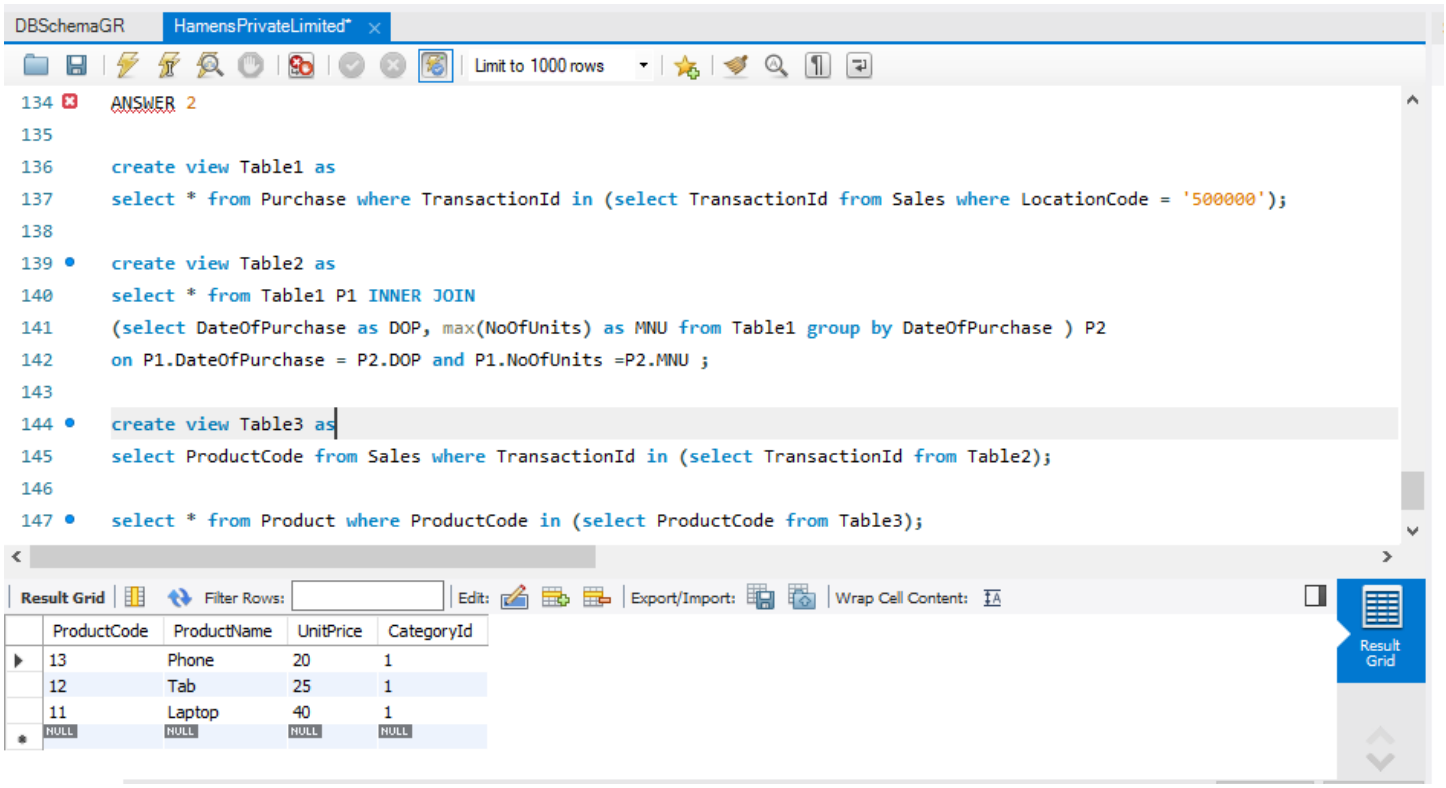
Screenshots



ANSWER 3

SQL Statements

create view NewTable as

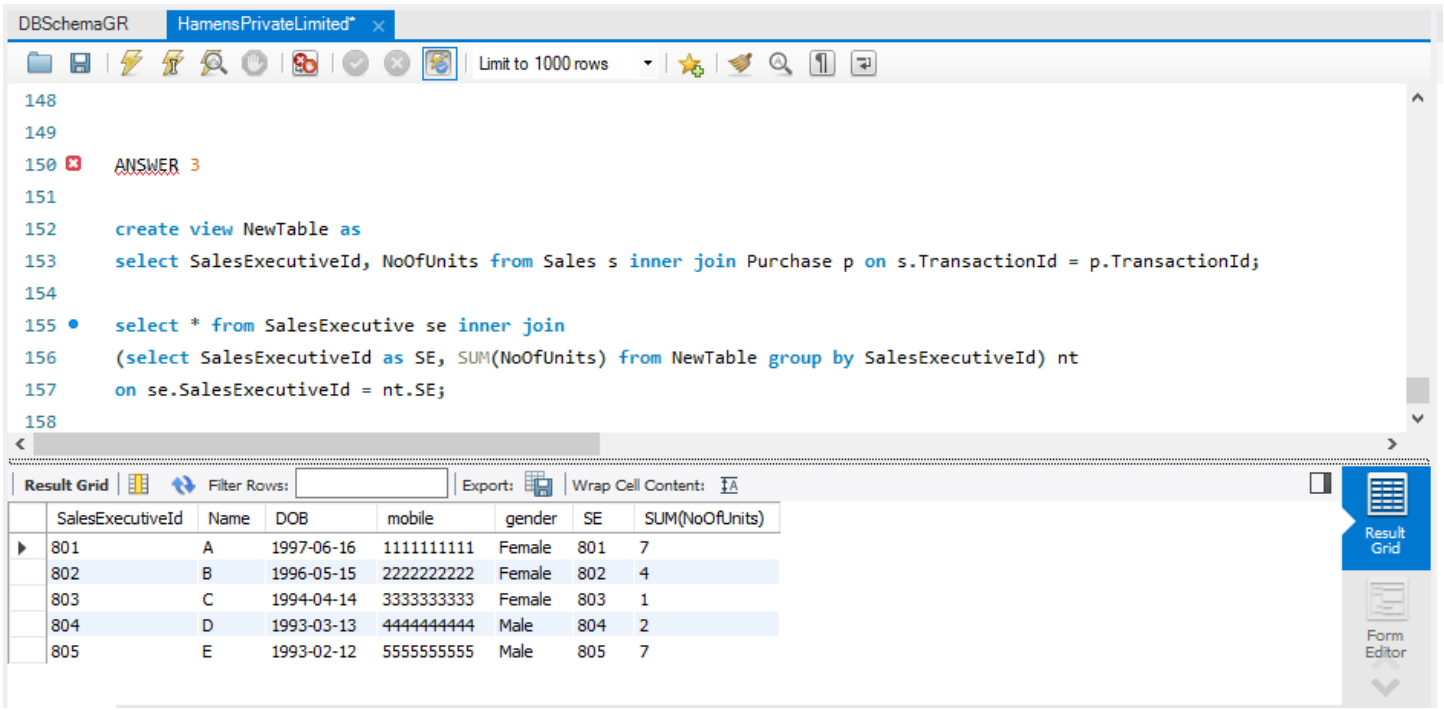
select SalesExecutiveId, NoOfUnits from Sales s inner join Purchase p on s.TransactionId = p.TransactionId;

select * from SalesExecutive se inner join

(select SalesExecutiveId as SE, SUM(NoOfUnits) from NewTable group by SalesExecutiveId) nt

on se.SalesExecutiveId = nt.SE;

Screenshots



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