**CREATE QUERIES FOR OUR MODEL:**

```
create schema groupassignment;

CREATE TABLE BRAND(
  BRAND_ID VARCHAR(25) NOT NULL,
  BRAND_NAME VARCHAR(30) NOT NULL,
  PRIMARY KEY (BRAND_ID)
);

CREATE TABLE PRODUCT(
  PRODUCT_ID VARCHAR(25) NOT NULL,
  BRAND_ID VARCHAR(25) NOT NULL,
  PRIMARY KEY (PRODUCT_ID),
  FOREIGN KEY (BRAND_ID) REFERENCES BRAND(BRAND_ID)
);

create table INVENTORY (
PRODUCT_ID VARCHAR(25) NOT NULL,
INTERNAL_STORAGE VARCHAR(10) NOT NULL,
COLOR VARCHAR(25) NOT NULL,
PHONE_NAME VARCHAR(25) NOT NULL,
OPERATING_SYSTEM VARCHAR(25) NOT NULL,
RELEASE_YEAR VARCHAR(4) NOT NULL,
PRIMARY KEY (PRODUCT_ID),
FOREIGN KEY(PRODUCT_ID) REFERENCES PRODUCT(PRODUCT_ID));



create table ADDRESS(
ADDRESS_ID BIGINT NOT NULL,
ADDRESS_NAME VARCHAR(25) NOT NULL,
ADDRESS_NUMBER SMALLINT,
ZIPCODE INT NOT NULL,
AUTONOMOUS_COMMUNITY VARCHAR(25),
CITY VARCHAR(25),
PROVINCE VARCHAR(25),
PRIMARY KEY (ADDRESS_ID));

CREATE TABLE LOCATION(
LOCATION_ID VARCHAR(25) NOT NULL,
LOCATION_TYPE VARCHAR(15) NOT NULL,
ADDRESS_ID BIGINT NOT NULL,
PRIMARY KEY (LOCATION_ID),
FOREIGN KEY (ADDRESS_ID) REFERENCES ADDRESS(ADDRESS_ID));


CREATE TABLE STORE (
STORE_ID VARCHAR(25) NOT NULL,
LOCATION_ID VARCHAR(25) NOT NULL,
PRIMARY KEY (STORE_ID),
FOREIGN KEY (LOCATION_ID) REFERENCES LOCATION(LOCATION_ID)
);
```

```sql
CREATE TABLE SALESPERSON (
EMPLOYEE_ID VARCHAR(25) NOT NULL,
FIRST_NAME VARCHAR(25) NOT NULL,
MIDDLE_NAME VARCHAR(25),
LAST_NAME VARCHAR(25) NOT NULL,
BIRTHDATE TIMESTAMP NOT NULL,
SALARY DECIMAL(20,5) NOT NULL,
PRIMARY KEY (EMPLOYEE_ID)
);


CREATE TABLE CARD_TYPE(
CARD_TYPE VARCHAR(4) NOT NULL,
CCDESCRIPTION VARCHAR(20),
PRIMARY KEY (CARD_TYPE)
);

CREATE TABLE PAYMENT_STATUS (
PAYMENT_STATUS VARCHAR(2) NOT NULL,
PAYMENT_DESCRIPTION VARCHAR(12),
PRIMARY KEY (PAYMENT_STATUS)
);
```

```
CREATE TABLE PAYMENT (
PAYMENT_ID VARCHAR(25) NOT NULL,
DATETIME_CREATED DATETIME NOT NULL,
PAYMENT_STATUS VARCHAR(2) NOT NULL,
CARD_TYPE VARCHAR(4) NOT NULL,
CARD_NUMBER_ENCRYPTED VARCHAR(25) NOT NULL,
CVV_ENCRYPTED VARCHAR(4) NOT NULL,
NAME_ON_CARD VARCHAR(25) NOT NULL,
PRIMARY KEY (PAYMENT_ID),
FOREIGN KEY(PAYMENT_STATUS) REFERENCES PAYMENT_STATUS(PAYMENT_STATUS),
FOREIGN KEY(CARD_TYPE) REFERENCES CARD_TYPE(CARD_TYPE)
);


CREATE TABLE TICKET (
TICKET_ID BIGINT NOT NULL,
TIMEPLACED TIMESTAMP NOT NULL,
EMPLOYEE_ID VARCHAR(25) NOT NULL,
TOTAL_PRODUCTS DECIMAL(10,2) NOT NULL,
TOTAL_TAX_AMOUNT DECIMAL(10,2),
TOTAL_ORDER_AMOUNT DECIMAL(10,2) NOT NULL,
CURRENCY VARCHAR(3) NOT NULL,
PAYMENT_ID VARCHAR(25) NOT NULL,
STORE_ID VARCHAR(25) NOT NULL,
PRIMARY KEY (TICKET_ID),
FOREIGN KEY (STORE_ID) REFERENCES STORE(STORE_ID),
FOREIGN KEY (EMPLOYEE_ID) REFERENCES SALESPERSON(EMPLOYEE_ID),
FOREIGN KEY (PAYMENT_ID) REFERENCES PAYMENT(PAYMENT_ID));
```

```
CREATE TABLE TICKET_ITEM(

TICKET_ID BIGINT NOT NULL,

NUMSEQ SMALLINT NOT NULL,

PRODUCT_ID VARCHAR(25) NOT NULL,

QUANTITY SMALLINT NOT NULL,

PRODUCT_PRICE DECIMAL NOT NULL,

CURRENCY VARCHAR(3) NOT NULL,

PRIMARY KEY (TICKET_ID, NUMSEQ),

FOREIGN KEY (PRODUCT_ID) REFERENCES PRODUCT(PRODUCT_ID),

FOREIGN KEY (TICKET_ID) REFERENCES TICKET(TICKET_ID));
```

**INSERT QUERIES FOR OUR MODEL:**

```
INSERT INTO SALESPERSON
(EMPLOYEE_ID, FIRST_NAME, MIDDLE_NAME, LAST_NAME, BIRTHDATE, SALARY) VALUES
(781, 'Ivan',NULL, 'Lopez','1998-07-08',75500),
(782,'Nacho',NULL, 'Pire', '1995-06-25',76100),
(783, 'Ludovico', NULL, 'Gandolfi', '1997-09-27',73000),
(784,'Adrian', NULL, 'Ku', '1999-03-20', 65700),
(785, 'Priyanka', NULL, 'Jakka', '1993-05-13', 77000);
```

```
INSERT INTO ADDRESS VALUES
('101','Maria De Molina',31,28006,'Madrid','Madrid','Madrid'),
('102','Urbita Kalea',25,28006,'San Sebastian','Gipuzkoa','Basque Country'),
('103','Hispanidad',NULL,28042,'Madrid','Madrid','Madrid'),
('104','Seville',NULL,41007,'Seville','Seville','Andalucia'),
('105','Oscar Esplá',49,3007,'Alicante','Alicante','Valencia');
```

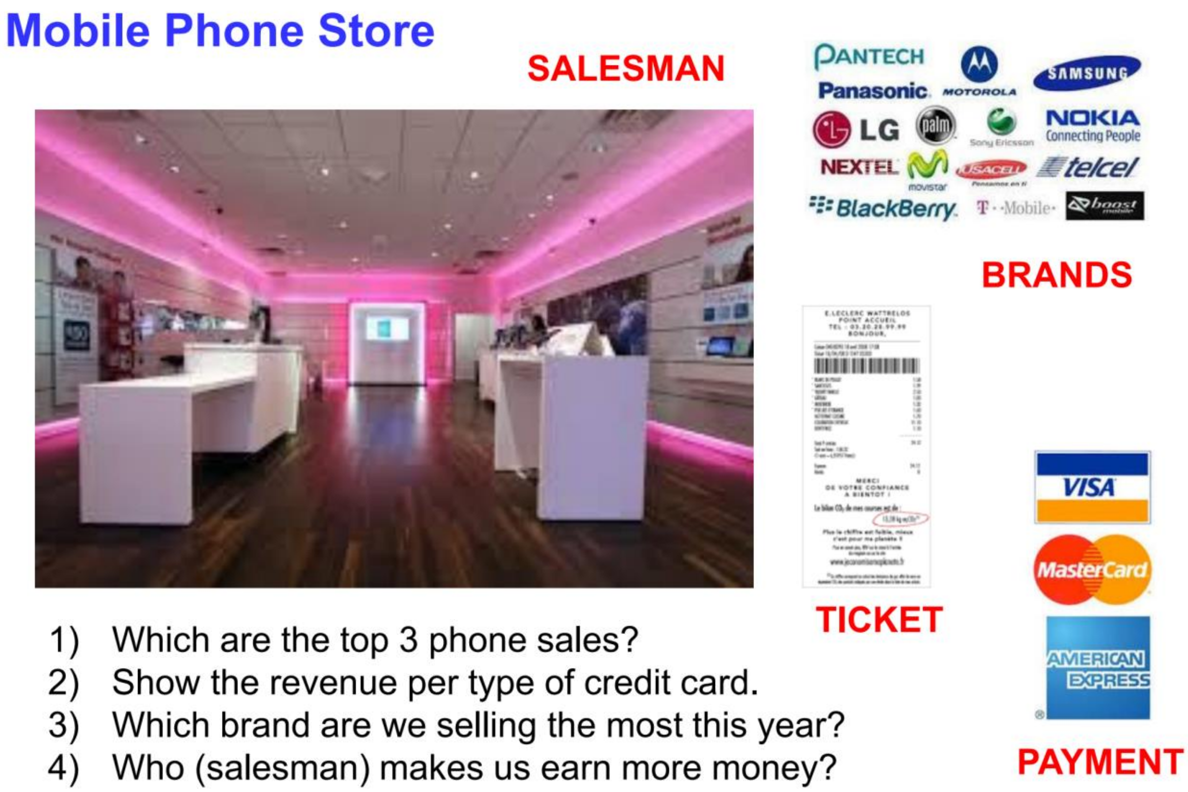
```sql
INSERT INTO LOCATION VALUES
('6010','Mall','101'),
('6011','Street','102'),
('6012','Airport','103'),
('6013','Station','104'),
('6014','Avenue','105');

INSERT INTO STORE VALUES
('581','6010'),
('582','6011'),
('583','6012'),
('584','6013'),
('585','6013'),
('586','6014');

INSERT INTO BRAND VALUES
('SAM1', 'SAMSUNG'),
('APP1', 'APPLE'),
('XIAOMI1', 'XIAOMI');

INSERT INTO PRODUCT VALUES
('A2894', 'APP1'),
('A2895', 'APP1'),
('A2896', 'APP1'),
('A2897', 'APP1'),
('SM-G793', 'SAM1'),
('SM-G793N','SAM1'),
('SUM-G793U', 'SAM1'),
('XM39028U', 'XIAOMI1'),
('XM29028S', 'XIAOMI1'),
('XM29028N', 'XIAOMI1');
```

```
INSERT INTO INVENTORY VALUES
('A2894','128', 'MIDNIGHT', 'iPhone 14 Pro Max 128GB', 'IOS', '2022'),
('A2895','256', 'RED', 'iPhone 14 Pro Max 256GB', 'IOS', '2022'),
('A2896', '128', 'PURPLE', 'iPhone 14 Pro 128GB', 'IOS', '2022'),
('A2897', '256', 'BLUE', 'iPhone 14 Pro 256GB', 'IOS', '2022'),
('SM-G793','128', 'GREEN', 'Samsung Galaxy S22', 'ANDROID', '2021'),
('SM-G793N','256','ORANGE','Samsung Galaxy Note11', 'ANDROID', '2021'),
('SUM-G793U','128','PURPLE', 'Samsung Galaxy S22U', 'ANDROID', '2021'),
('XM39028U','256','BLUE', 'Xiaomi 12 Ultra', 'ANDROID','2022'),
('XM29028S','128','GREEN', 'Xiaomi 12S', 'ANDROID', '2022'),
('XM29028N','256', 'MIDNIGHT', 'Xiaomi 12 Note', 'ANDROID', '2022');

INSERT INTO CARD_TYPE (CARD_TYPE, CCDESCRIPTION)
VALUES ('MC','Master Card'),
('VC','Visa Card'),
('DS','Discover Card'),
('AM','American Express'),
('DC','Diners Club'),
('BK', 'Others Bank Cards');

INSERT INTO PAYMENT_STATUS (PAYMENT_STATUS, PAYMENT_DESCRIPTION)
VALUES ('NW','New_Payment'),
('SU','Success'),
('AP','Approving'),
('F','Failed'),
('C','Cancelled'),
('E', 'Expired');
```

```
INSERT INTO PAYMENT (PAYMENT_ID, DATETIME_CREATED, PAYMENT_STATUS, CARD_TYPE,
CARD_NUMBER_ENCRYPTED, CVV_ENCRYPTED, NAME_ON_CARD) VALUES

('1001', '2022-06-05 13:28:00', 'SU','MC','543565785423xxxx','XXX','Jessica Alonzo'),

('1002', '2022-08-05 14:28:10', 'SU','VC','465789785412xxxx','XXX','Constante Noppers'),

('1003', '2022-12-09 10:45:00', 'F', 'DS','956123425417xxxx','XXX','Mikael Matsyuma'),

('1004', '2022-12-20 20:28:20', 'SU','DS','912356765419xxxx','XXX','Quy Kantola'),

('1005', '2022-12-11 21:28:50', 'SU','DS','923467825475xxxx','XXX','Norman Lutters'),

('1006', '2022-12-22 20:28:00', 'SU','MC','548126500674xxxx','XXX','Bao Aliyev'),

('1007', '2022-12-23 19:16:00', 'SU','MC','548126746911xxxx','XXX','Leokadia Yli-Hannuksela'),

('1008', '2022-12-24 18:28:50', 'SU','MC','548126109505xxxx','XXX','Valrie Kuester');


INSERT INTO TICKET

(TICKET_ID, TIMEPLACED, EMPLOYEE_ID, TOTAL_PRODUCTS, TOTAL_TAX_AMOUNT,
TOTAL_ORDER_AMOUNT, CURRENCY, PAYMENT_ID, STORE_ID)

VALUES

(981, '2022-05-06 13:28:00', '781', 2298.00, 482.58, 2780.58, 'EUR', '1001', '581'),

(982, '2022-05-08 14:28:00', '782', 999.00, 209.79, 1208.79, 'EUR', '1002', '581'),

(983, '2022-09-12 10:45:00', '783', 2179.00, 457.59, 2636.59, 'EUR', '1003', '582'),

(984, '2022-12-20 20:28:00', '784', 1830.00, 384.30, 2214.30, 'EUR', '1004', '582'),

(985, '2022-12-11 21:28:00', '785', 1000.00, 210.00, 1210.00, 'EUR', '1005', '583'),

(986, '2022-11-22 09:58:00', '782', 1360.00, 285.60, 1645.60, 'EUR', '1006', '586'),

(987, '2022-08-15 10:32:00', '781', 2398.00, 503.58, 2901.58, 'EUR', '1007', '585'),

(988, '2022-06-03 13:22:00', '785', 2430.00, 510.30, 2940.30, 'EUR', '1008', '584');
```

```
INSERT INTO TICKET_ITEM (Ticket_ID, NUMSEQ, Product_ID, Quantity, Product_price, Currency)VALUES
( 981, 1, 'A2894', 1, 1099, 'EUR'),
( 981, 2, 'A2895', 1, 1199, 'EUR'),
( 982, 3, 'A2896', 1, 999, 'EUR'),
( 983, 4, 'A2897', 1, 1099, 'EUR'),
( 983, 5, 'SM-G793', 1, 680, 'EUR'),
( 983, 6, 'SM-G793N', 1, 400, 'EUR'),
( 984, 7, 'SUM-G793U', 1, 1020, 'EUR'),
( 984, 8, 'XM39028U', 1, 810, 'EUR'),
( 985, 9, 'XM29028S', 1, 505, 'EUR'),
( 985, 10, 'XM29028N', 1, 495, 'EUR'),
( 986, 11, 'SM-G793', 2, 680, 'EUR'),
( 987, 12, 'A2895', 2, 1199, 'EUR'),
( 988, 13, 'XM39028U', 3, 810, 'EUR');
```

**QUESTIONS AND ANSWERS:**



Mobile Phone Store

1) Which are the top 3 phone sales?
2) Show the revenue per type of credit card.
3) Which brand are we selling the most this year?
4) Who (salesman) makes us earn more money?

1) **Which are the top 3 phone sales?**

```
SELECT P.PRODUCT_ID, QUANTITY, PHONE_NAME
FROM PRODUCT P INNER JOIN TICKET_ITEM TI
 ON P.PRODUCT_ID = TI.PRODUCT_ID
 INNER JOIN INVENTORY I
 ON I.PRODUCT_ID = P.PRODUCT_ID
ORDER BY QUANTITY DESC
 LIMIT 3;
```

2) **Show the revenue per type of credit card.**

```
SELECT P.CARD_TYPE,CT.CCDESCRIPTION, SUM(TOTAL_ORDER_AMOUNT) AS
CC_TOTAL_ORDER_AMOUNT
FROM TICKET T INNER JOIN PAYMENT P
ON (T.PAYMENT_ID = P.PAYMENT_ID)
INNER JOIN CARD_TYPE CT
ON (CT.CARD_TYPE = P.CARD_TYPE)
GROUP BY P.CARD_TYPE
ORDER BY CC_TOTAL_ORDER_AMOUNT DESC;
```

3) **Which brand are we selling the most this year?**

```
SELECT a.BRAND_ID, a.BRAND_NAME, SUM(d.TOTAL_ORDER_AMOUNT) AS
BRAND_TOTAL_AMOUNT
FROM BRAND a INNER JOIN PRODUCT b ON (a.BRAND_ID = b.BRAND_ID)
INNER JOIN TICKET_ITEM c ON (b.PRODUCT_ID = c.PRODUCT_ID)
INNER JOIN TICKET d ON (c.TICKET_ID = d.TICKET_ID)
WHERE YEAR(TIMEPLACED) = year(current_date())
GROUP BY a.BRAND_ID
ORDER BY BRAND_TOTAL_AMOUNT DESC
LIMIT 1;
```

**4) Who (salesman) makes us earn more money?**

```
SELECT S.EMPLOYEE_ID, SUM(T.TOTAL_ORDER_AMOUNT) AS AMOUNT_SOLD_BY_EMPLOYEE
FROM TICKET T INNER JOIN SALESPERSON S
ON (T.EMPLOYEE_ID = S.EMPLOYEE_ID)
GROUP BY T.EMPLOYEE_ID
ORDER BY SUM(T.TOTAL_ORDER_AMOUNT) DESC
LIMIT 1;
```

**5) Which is the best selling store based on revenue?**

```
SELECT S.STORE_ID, A.ADDRESS_NAME, A.ADDRESS_NUMBER, A.ZIPCODE,
SUM(T.TOTAL_ORDER_AMOUNT) AS STORE_TOTAL_AMOUNT
FROM STORE S INNER JOIN LOCATION L
ON S.LOCATION_ID = L.LOCATION_ID
INNER JOIN ADDRESS A
ON L.ADDRESS_ID = A.ADDRESS_ID
 INNER JOIN TICKET T
 ON S.STORE_ID = T.STORE_ID
GROUP BY T.STORE_ID
ORDER BY SUM(T.TOTAL_ORDER_AMOUNT) DESC
LIMIT 1;
```