Q1)

CREATE TABLE EMPLOYEE (

ID INT PRIMARY KEY,

PERSON\_NAME VARCHAR(100),

STREET VARCHAR(100),

CITY VARCHAR(100)

);

CREATE TABLE WORKS (

ID INT PRIMARY KEY,

COMPANY\_NAME VARCHAR(100),

SALARY DECIMAL(10,2)

);

CREATE TABLE COMPANY (

COMPANAY\_NAME VARCHAR(100) PRIMARY KEY,

CITY VARCHAR(100),

FOREIGN KEY (company\_name) REFERENCES WORKS(company\_name)

);

CREATE TABLE MANAGES (

ID INT PRIMARY KEY,

MANAGER\_ID INT,

FOREIGN KEY (MANAGER\_ID) REFERENCES EMPLOYEE(ID)

);

1. **Find the ID of each customer of the bank who has an account but not a loan.**

SELECT ID FROM CUSTOMER

WHERE

EXISTS(

SELECT ID FROM DEPOSITOR

WHERE DEPOSITOR.ID = CUSTOMER.ID)

AND

NOT EXISTS (

SELECT ID FROM BORROWER

WHERE BORROWER.ID = CUSTOMER.ID

)**B. Find the ID of each customer who lives on the same street and in the same city as customer '12345'.**

SELECT ID FROM CUSTOMER

WHERE CUSTOMER\_STREET = (

SELECT CUSTOMER\_STREET FROM CUSTOMER

WHERE ID = 12345

)

AND CUSTOMER\_CITY = (

SELECT CUSTOMER\_CITY FROM CUSTOMER

WHERE ID = 12345

)

**C. Find the name of each branch that has at least one customer who has an account in the bank and who lives in "Harrison".**

SELECT BRANCH\_NAME FROM BRANCH

WHERE EXISTS(

SELECT \* FROM CUSTOMER

JOIN DEPOSITOR ON CUSTOMER.ID = DEPOSITOR.ID

JOIN ACCOUNT ON ACCOUNT.ACCOUNT\_NUMBER = DEPOSITOR.ACCOUNT\_NUMBER

WHERE CUSTOMER\_CITY = 'Harrison'

AND BRANCH.BRANCH\_NAME = ACCOUNT.BRANCH\_NAME)

Q3) A)

SELECT DAY,QTY,

SUM(QTY) OVER(ORDER BY DAY) AS CUMQTY

FROM

DEMAND;

B)  
SELECT product,day, qty, ROW\_NUMBER() OVER (PARTITION BY product ORDER BY qty) AS RN

FROM demand

WHERE (product, qty) IN (

SELECT product, MIN(qty)

FROM demand

GROUP BY product

UNION ALL

SELECT

product, MIN(qty) FROM demand

WHERE qty NOT IN ( SELECT MIN(qty)

FROM demand

GROUP BY product)

GROUP BY product );