

SQL Query Report(Lab 5)

Given:

```
CREATE TABLE CUSTOMER (  
  CUSTOMER_NO CHAR (5) PRIMARY KEY ,  
  CUSTOMER_NAME VARCHAR (20) NOT NULL ,  
  CUSTOMER_CITY VARCHAR (10)  
) ;  
CREATE TABLE ACCOUNT (  
  ACCOUNT_NO CHAR (5) PRIMARY KEY ,  
  BALANCE DECIMAL (12 ,2) NOT NULL  
) ;  
CREATE TABLE DEPOSITOR (  
  CUSTOMER_NO CHAR (5) ,  
  ACCOUNT_NO CHAR (5) ,  
  PRIMARY KEY ( CUSTOMER_NO , ACCOUNT_NO )  
) ;  
INSERT INTO CUSTOMER ( CUSTOMER_NO , CUSTOMER_NAME ,  
  CUSTOMER_CITY ) VALUES  
  ('C-101', 'John Doe', 'DHK'),  
  ('C-102', 'Jane Smith', 'KHL'),  
  ('C-103', 'Alice Brown', 'CTG'),  
  ('C-104', 'Bob Johnson', 'DHK') ;  
  
INSERT INTO ACCOUNT ( ACCOUNT_NO , BALANCE ) VALUES('A-101',  
  5000.00),  
  ('A-102', 15000.00),  
  ('A-103', 25000.00),  
  ('A-104', 8000.00);  
  
INSERT INTO DEPOSITOR ( CUSTOMER_NO , ACCOUNT_NO ) VALUES ('C-  
  101', 'A-101'),  
  ('C-102', 'A-102'),  
  ('C-103', 'A-103'),  
  ('C-104', 'A-104');
```

Task Set 1:

```
-- task 1:
ALTER TABLE CUSTOMER
ADD COLUMN DATE_OF_BIRTH DATE;

-- task 2:
RENAME TABLE DEPOSITOR TO DEPOSITOR_INFO;

-- task 3:
ALTER TABLE DEPOSITOR_INFO
CHANGE COLUMN CUSTOMER_NO C_NO CHAR(5);

ALTER TABLE DEPOSITOR_INFO
CHANGE COLUMN ACCOUNT_NO A_NO CHAR(5);

-- task 4:
ALTER TABLE DEPOSITOR_INFO
ADD CONSTRAINT fk_customer FOREIGN KEY (C_NO) REFERENCES
CUSTOMER(CUSTOMER_NO);

ALTER TABLE DEPOSITOR_INFO
ADD CONSTRAINT fk_account FOREIGN KEY (A_NO) REFERENCES
ACCOUNT(ACCOUNT_NO);

-- task 5:
SELECT * FROM CUSTOMER;

-- TASK 6:
SELECT CUSTOMER.CUSTOMER_NAME, ACCOUNT.BALANCE
FROM CUSTOMER
INNER JOIN DEPOSITOR_INFO ON CUSTOMER.CUSTOMER_NO =
DEPOSITOR_INFO.C_NO
INNER JOIN ACCOUNT ON DEPOSITOR_INFO.A_NO = ACCOUNT.ACCOUNT_NO;
```

```
-- TASK 7:
SELECT AVG(BALANCE) AS Average_Balance
FROM ACCOUNT;

-- TASK 8:
SELECT CUSTOMER_NAME, A_NO
FROM CUSTOMER
NATURAL JOIN DEPOSITOR_INFO;

-- TASK 9:
UPDATE CUSTOMER
SET CUSTOMER_CITY = 'KLN'
WHERE CUSTOMER_NO = 'C-102';

-- TASK 10:
DELETE FROM ACCOUNT
WHERE ACCOUNT_NO = 'A-104';

-- TASK 11:
DELETE FROM CUSTOMER
WHERE CUSTOMER_NO NOT IN (SELECT C_NO FROM DEPOSITOR_INFO);
```

Task Set 2:

```
-- Task 2.1
CREATE TABLE LOAN(
  LOAN_NO CHAR(5) PRIMARY KEY,
  AMOUNT DECIMAL(12,2) NOT NULL
);

-- TASK 2.2
INSERT INTO LOAN VALUES ('L-201', 10000.00),
('L-202', 20000.00),
('L-203', 15000.00);

CREATE TABLE BORROWER (
  CUSTOMER_NO CHAR (5) ,
  LOAN_NO CHAR (5) ,
  PRIMARY KEY (CUSTOMER_NO , LOAN_NO) ,
  FOREIGN KEY (CUSTOMER_NO) REFERENCES CUSTOMER (CUSTOMER_NO) ,
  FOREIGN KEY (LOAN_NO) REFERENCES LOAN (LOAN_NO)
) ;

INSERT INTO BORROWER VALUES ('C-101', 'L-201'),
('C-102', 'L-202'),
('C-103', 'L-203');

-- TASK 2.3
SELECT CUSTOMER.CUSTOMER_NO, CUSTOMER.CUSTOMER_NAME
FROM CUSTOMER
INNER JOIN DEPOSITOR_INFO ON CUSTOMER.CUSTOMER_NO =
DEPOSITOR_INFO.C_NO
INNER JOIN BORROWER ON CUSTOMER.CUSTOMER_NO =
BORROWER.CUSTOMER_NO;
```

```
-- TASK 2.4
SELECT CUSTOMER.CUSTOMER_NO, CUSTOMER.CUSTOMER_NAME
FROM CUSTOMER
INNER JOIN DEPOSITOR_INFO ON CUSTOMER.CUSTOMER_NO =
DEPOSITOR_INFO.C_NO
LEFT JOIN BORROWER ON CUSTOMER.CUSTOMER_NO = BORROWER.CUSTOMER_NO
WHERE BORROWER.LOAN_NO IS NULL;

-- OR,
SELECT CUSTOMER.CUSTOMER_NO, CUSTOMER.CUSTOMER_NAME
FROM CUSTOMER
INNER JOIN DEPOSITOR_INFO ON CUSTOMER.CUSTOMER_NO =
DEPOSITOR_INFO.C_NO
WHERE CUSTOMER.CUSTOMER_NO NOT IN (
    SELECT BORROWER.CUSTOMER_NO
    FROM BORROWER
);

-- TASK 2.5
UPDATE ACCOUNT
SET BALANCE = BALANCE * 1.05
WHERE BALANCE < 10000;
```