Assignment No.3

```
SQL> CREATE TABLE customer(
  2    account_no int PRIMARY KEY,
  3    name varchar(20),
  4    branch varchar(10),
  5    bal int,
  6    cust_type varchar(10) CHECK (cust_type IN ('loan', 'savings')) NOT NULL
  7  );
SQL> INSERT INTO customer VALUES (1,'Soham','Pen',10000,'savings');
SQL> INSERT INTO customer VALUES (2,'Soham','Pen',100000,'loan');
SQL> INSERT INTO customer VALUES (8, 'ATAHRVA', 'Alibag', 50000, 'savings');
SQL> INSERT INTO customer  VALUES (9, 'ATAHRVA', 'Nigdi', 10000, 'loan');
SQL> INSERT INTO customer  VALUES (10, 'VEDANT', 'Nigdi', 20000, 'savings');
SQL> INSERT INTO customer  VALUES (12, 'MRUNALINI', 'Alibag', 40000, 'savings');
SQL> INSERT INTO customer  VALUES (13, 'MRUNALINI', 'Satara', 50000, 'loan');.
SQL> INSERT INTO customer VALUES (14, 'HARI', 'Nigdi', 60000, 'savings');
SQL> INSERT INTO customer VALUES (16, 'ARYAN', 'Alibag', 80000, 'savings');
```

SQL> --1.Find all customers who have an account or loan or both at bank.

```
SQL> SELECT DISTINCT(NAME) FROM customer;
NAME
--------------------
HARI
ARYAN
Soham
VEDANT
MRUNALINI
ATAHRVA
6 rows selected.
```

SQL> --2.Write SQL statement returns the cities (only distinct values)

```
SQL> SELECT DISTINCT(BRANCH) FROM customer;

BRANCH

----------

Pen

Alibag

Nigdi

Satara
```

SQL> --3.Write SQL statement lists all depositor and borrower.

```
SQL> DECLARE
  2    named customer.name%TYPE;
  3  BEGIN
  4  DBMS_OUTPUT.PUT_LINE('Borrowers : ');
  5    FOR names IN (SELECT NAME FROM customer WHERE CUST_TYPE='loan') LOOP
  6      named := names.NAME; -- Fetch the value of the 'NAME' column into the 'named' variable
  7      DBMS_OUTPUT.PUT_LINE(named);
  8    END LOOP;
  9  DBMS_OUTPUT.PUT_LINE('Depositors : ');
 10    FOR names IN (SELECT NAME FROM customer WHERE CUST_TYPE='savings') LOOP
 11      named := names.NAME;
 12      DBMS_OUTPUT.PUT_LINE(named);
 13    END LOOP;
 14  END;
 15  /
Borrowers :

Soham

ATAHRVA

MRUNALINI

Depositors :

Soham
```

ATAHRVA

VEDANT

MRUNALINI

HARI

ARYAN

PL/SQL procedure successfully completed.

SQL> --4. Find all customers who have both account and loan at bank.

SQL> SELECT DISTINCT(NAME) FROM CUSTOMER WHERE NAME IN (SELECT NAME FROM CUSTOMER WHERE CUST_TYPE = 'savings') AND NAME IN (SELECT NAME FROM CUSTOMER WHERE CUST_TYPE = 'loan');

NAME

Soham

MRUNALINI

ATAHRVA

SQL> --5.Find all customer who have account but no loan at the bank.

SQL> SELECT DISTINCT(NAME) FROM CUSTOMER WHERE NAME IN (SELECT NAME FROM CUSTOMER WHERE CUST_TYPE = 'savings') AND NAME NOT IN (SELECT NAME FROM CUSTOMER WHERE CUST_TYPE = 'loan');

NAME

ARYAN

HARI

VEDANT

SQL> --6. Calculate total loan amount given by bank.

SQL> SELECT SUM(BAL) FROM Customer WHERE cust_type = 'loan';

SUM(BAL)

160000

SQL> --7. Find average account balance at Akurdi branch.

SQL> SELECT AVG(BAL) FROM Customer WHERE branch = 'Nigdi' AND cust_type = 'savings';

AVG(BAL)

40000

SQL> --8. Find the average account balance at each branch

SQL> DECLARE

2 v_branch customer.branch%TYPE;

3 v_avg_savings_balance NUMBER;

4 BEGIN

5 FOR REC IN (SELECT DISTINCT BRANCH FROM Customer) LOOP

6 SELECT AVG(BAL) INTO v_avg_savings_balance FROM customer WHERE branch = REC.branch AND CUST_TYPE='savings';

7 DBMS_OUTPUT.PUT_LINE(REC.branch || ' ' || v_avg_savings_balance);

8 END LOOP;

9 END;

10 /

Pen 10000

Alibag 56666.666666666666666666666666666666667

Nigdi 40000

Satara

PL/SQL procedure successfully completed.

SQL> --9. Find no. of depositors at each branch.

SQL> SELECT COUNT(BRANCH),BRANCH FROM CUSTOMER WHERE CUST_TYPE = 'savings' GROUP BY BRANCH;

COUNT(BRANCH) BRANCH

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1 Pen

3 Alibag

2 Nigdi

SQL> --10. Find the branches where average account balance > 12000.

SQL> DECLARE

2 v_branch customer.branch%TYPE;

3 v_avg_savings_balance NUMBER;

```
  4  BEGIN
  5    FOR REC IN (SELECT DISTINCT BRANCH FROM Customer) LOOP
  6      SELECT AVG(BAL) INTO v_avg_savings_balance FROM customer WHERE branch = REC.branch AND
CUST_TYPE='savings';
  7     IF v_avg_savings_balance>12000 THEN
  8                 DBMS_OUTPUT.PUT_LINE(REC.branch || ' ' || v_avg_savings_balance);
  9     END IF;
 10    END LOOP;
 11  END;
 12  /
Alibag 56666.666666666666666666666666666666667
Nigdi 40000
PL/SQL procedure successfully completed.
```

SQL> --11. Find number of tuples in customer relation.

```
SQL> SELECT COUNT(ACCOUNT_NO) FROM CUSTOMER;
COUNT(ACCOUNT_NO)
-----------------
                9
```