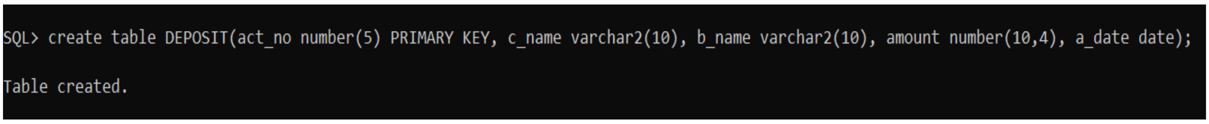
PRACTICAL-1

- **Creating and Manipulating Database objects andApplying Constraints (DDL)**

1) Write a query to create the table of DEPOSIT.QUERY:

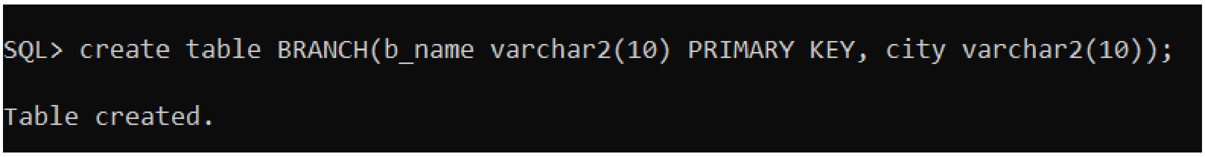
   create table DEPOSIT(act_no number(5) PRIMARY KEY, c_name varchar2(10), b_name varchar2(10), amount number(10,4), a_date date);



```
SQL> create table DEPOSIT(act_no number(5) PRIMARY KEY, c_name varchar2(10), b_name varchar2(10), amount number(10,4), a_date date);

Table created.
```

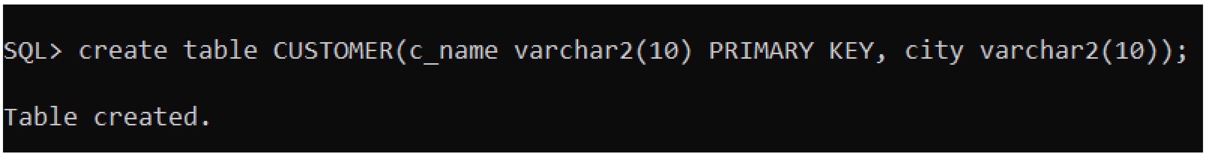
2) Write a query to create the table of BRANCH.QUERY:

   create table BRANCH(b_name varchar2(10) PRIMARY KEY, city varchar2(10));



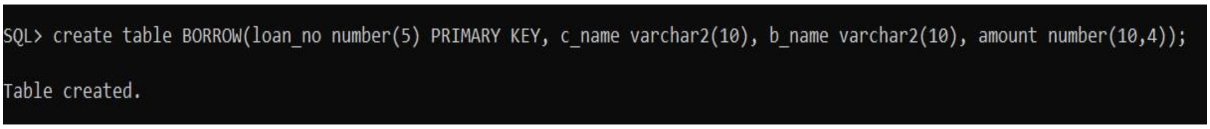
```
SQL> create table BRANCH(b_name varchar2(10) PRIMARY KEY, city varchar2(10));

Table created.
```

3) Write a query to create the table of CUSTOMER.QUERY:
   create table CUSTOMER(c_name varchar2(10) PRIMARY KEY, city varchar2(10));



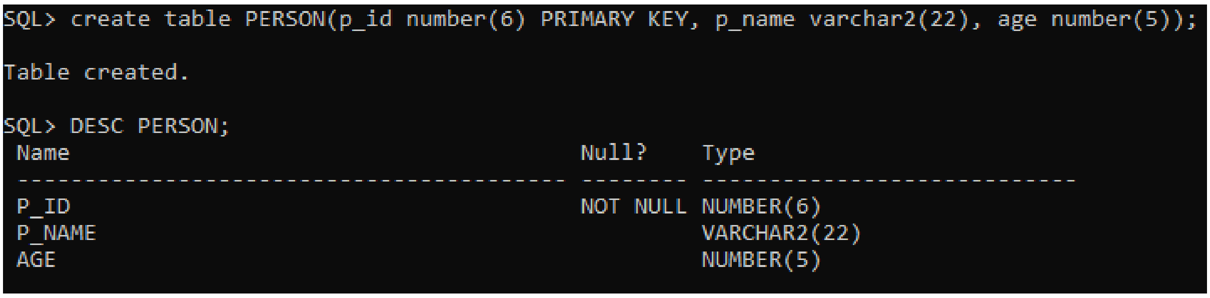
```
SQL> create table CUSTOMER(c_name varchar2(10) PRIMARY KEY, city varchar2(10));

Table created.
```

4) Write a query to create the table of BORROW.QUERY:
   create table BORROW(loan_no number(5) PRIMARY KEY, c_name varchar2(10), b_name varchar2(10), amount number(10,4));



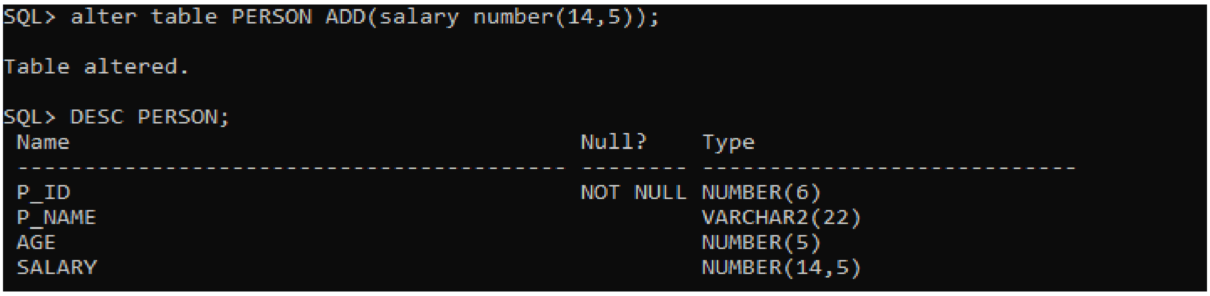
```
SQL> create table BORROW(loan_no number(5) PRIMARY KEY, c_name varchar2(10), b_name varchar2(10), amount number(10,4));

Table created.
```

5) Write a query to create table of PERSON.
QUERY:
create table PERSON(p_id number(5) PRIMARY KEY, p_name varchar2(20), age number(3));



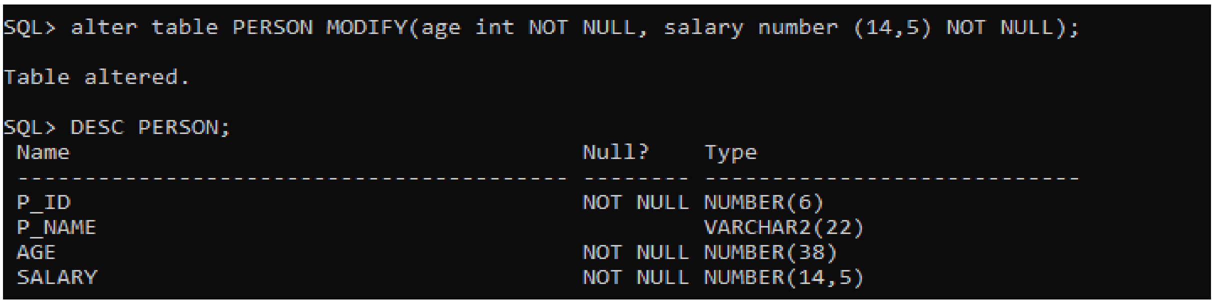
```
SQL> create table PERSON(p_id number(6) PRIMARY KEY, p_name varchar2(22), age number(5));

Table created.

SQL> DESC PERSON;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 P_ID                                      NOT NULL NUMBER(6)
 P_NAME                                             VARCHAR2(22)
 AGE                                                NUMBER(5)
```

6) Write a query to alter table of PERSON.
(i) Alter table by using ADD.
QUERY:
alter table PERSON ADD(salary number(10,4));



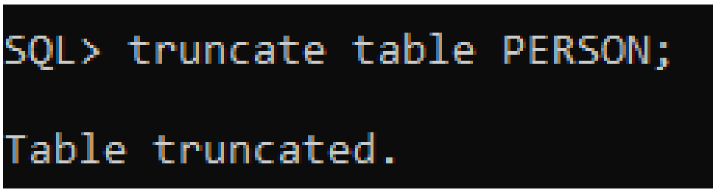
```
SQL> alter table PERSON ADD(salary number(14,5));

Table altered.

SQL> DESC PERSON;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 P_ID                                      NOT NULL NUMBER(6)
 P_NAME                                             VARCHAR2(22)
 AGE                                                NUMBER(5)
 SALARY                                             NUMBER(14,5)
```

(ii) Alter table by using MODIFY.
QUERY:
alter table PERSON MODIFY(age int NOT NULL, salary number (10,4) NOT NULL);



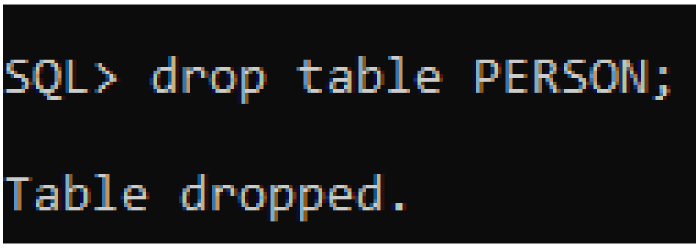
```
SQL> alter table PERSON MODIFY(age int NOT NULL, salary number (14,5) NOT NULL);

Table altered.

SQL> DESC PERSON;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 P_ID                                      NOT NULL NUMBER(6)
 P_NAME                                             VARCHAR2(22)
 AGE                                       NOT NULL NUMBER(38)
 SALARY                                    NOT NULL NUMBER(14,5)
```

7) Write a query to truncate table of PERSON.
QUERY:
truncate table PERSON;



```
SQL> truncate table PERSON;

Table truncated.
```

8) Write a query to drop table of PERSON.
QUERY:
drop table PERSON;

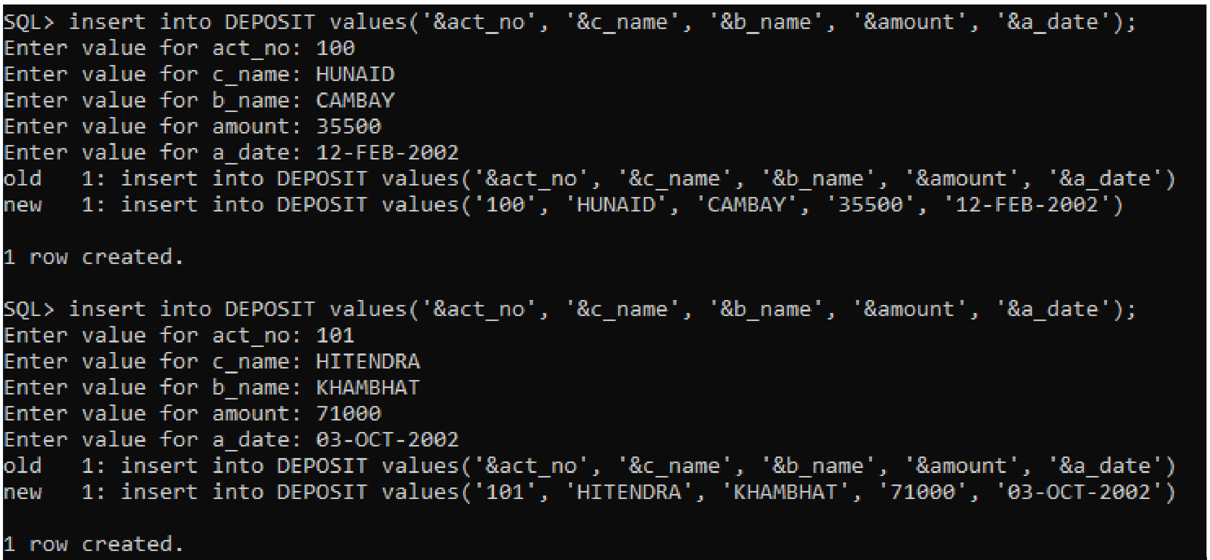


```
SQL> drop table PERSON;

Table dropped.
```

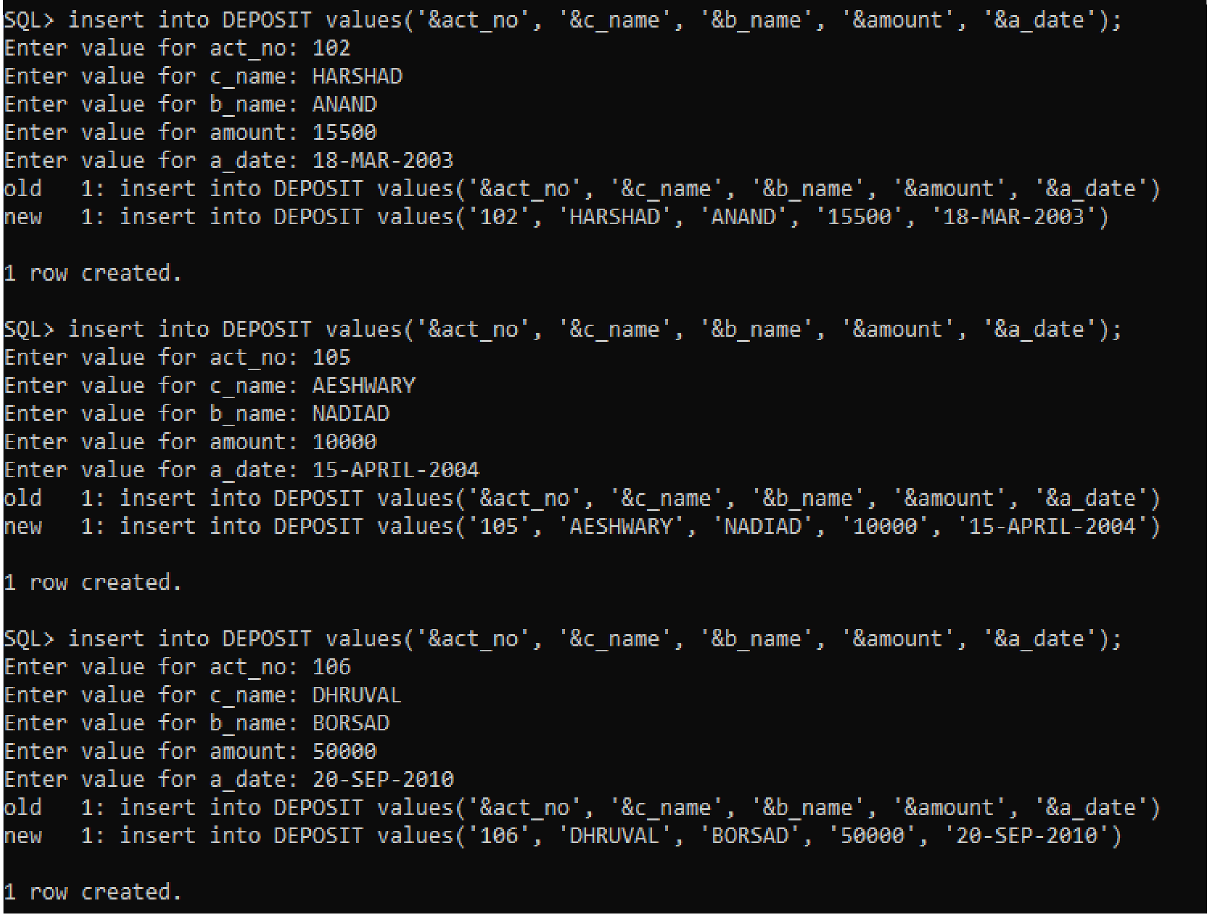
PRACTICAL-2

- ## Manipulating Data with Database Objects (DML)

1) Write a query to insert values in the table of DEPOSIT.
   QUERY:
   insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date');

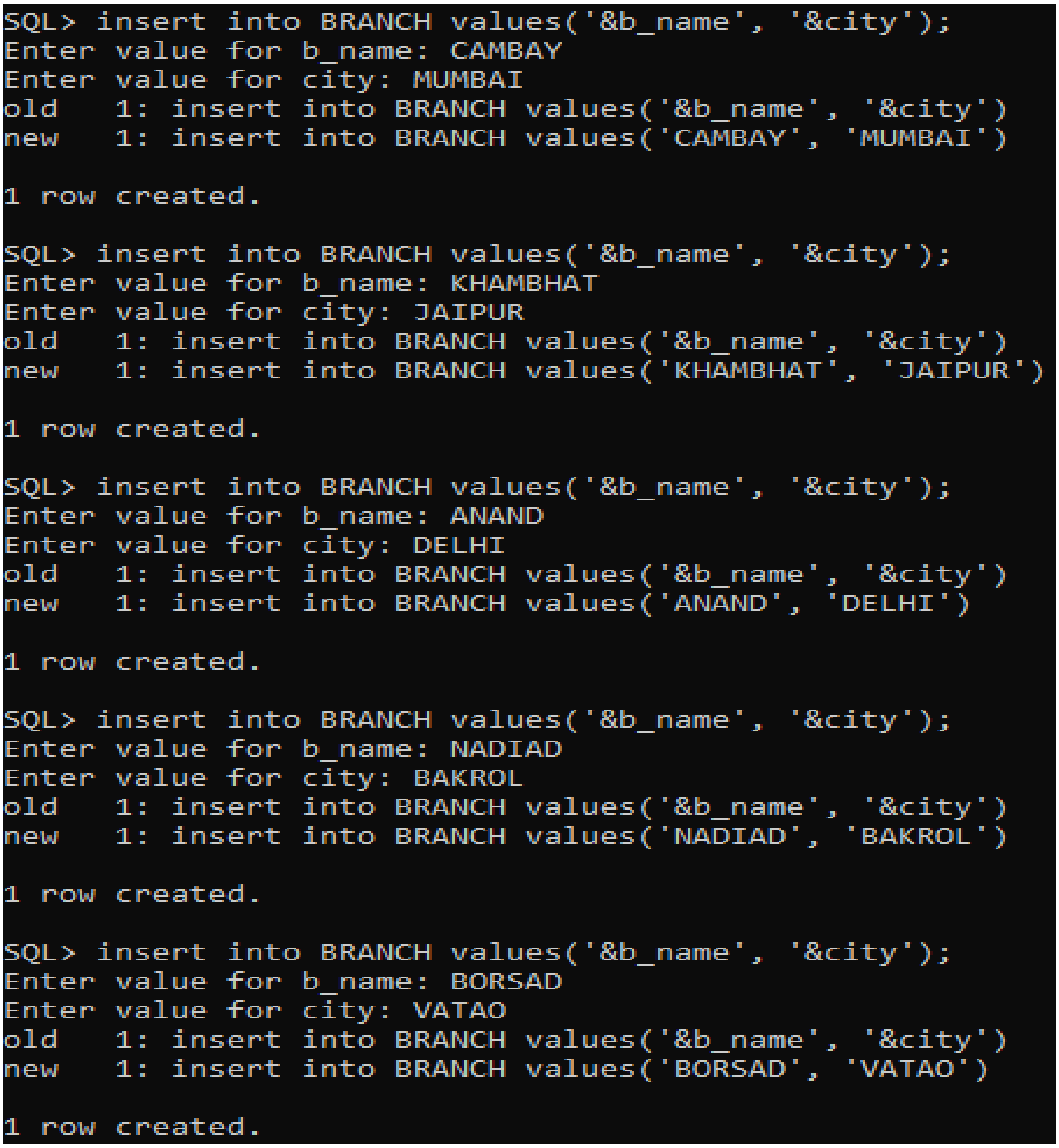


```
SQL> insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date');
Enter value for act_no: 100
Enter value for c_name: HUNAID
Enter value for b_name: CAMBAY
Enter value for amount: 35500
Enter value for a_date: 12-FEB-2002
old   1: insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date')
new   1: insert into DEPOSIT values('100', 'HUNAID', 'CAMBAY', '35500', '12-FEB-2002')

1 row created.

SQL> insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date');
Enter value for act_no: 101
Enter value for c_name: HITENDRA
Enter value for b_name: KHAMBHAT
Enter value for amount: 71000
Enter value for a_date: 03-OCT-2002
old   1: insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date')
new   1: insert into DEPOSIT values('101', 'HITENDRA', 'KHAMBHAT', '71000', '03-OCT-2002')

1 row created.
```



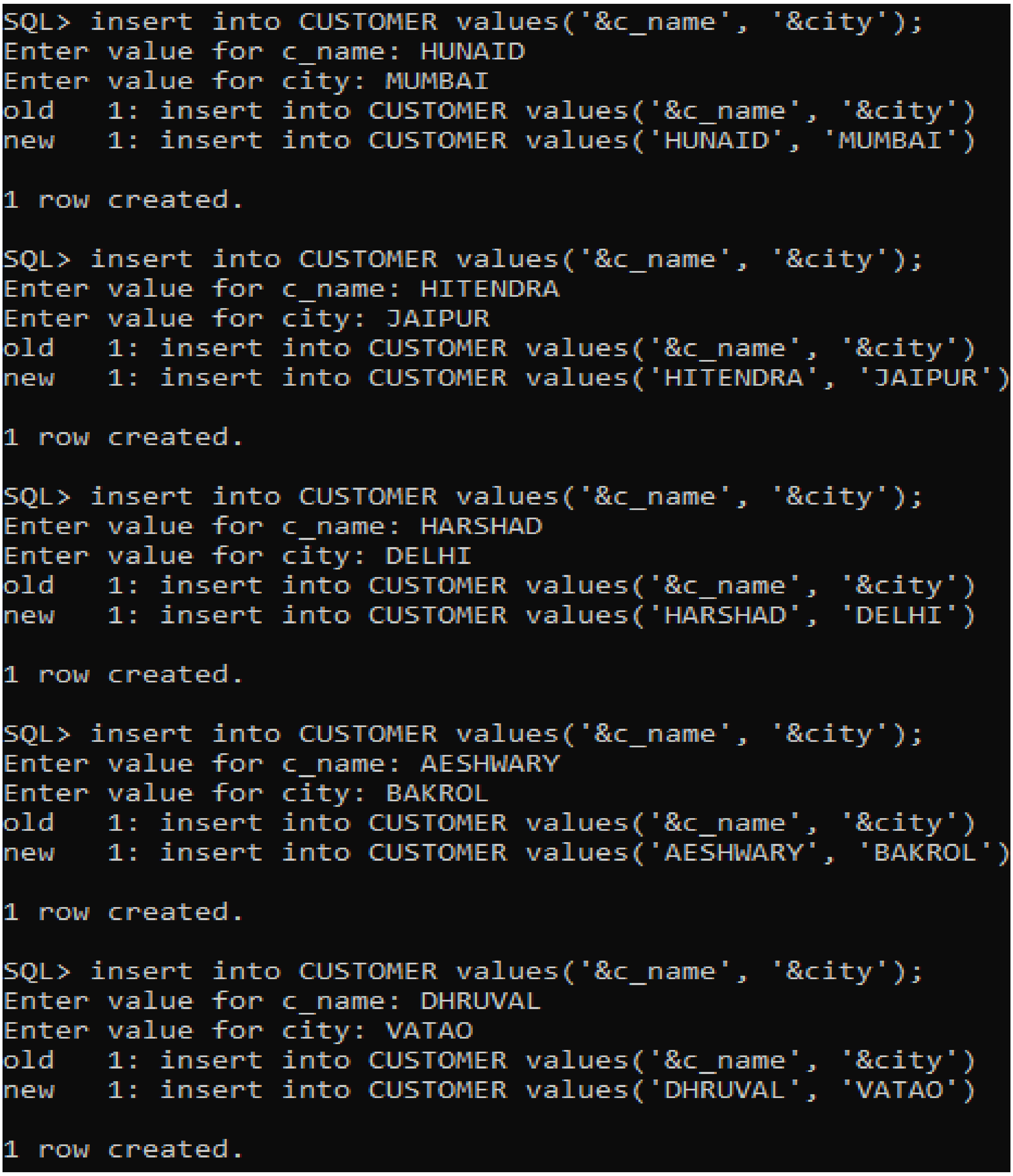
```
SQL> insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date');
Enter value for act_no: 102
Enter value for c_name: HARSHAD
Enter value for b_name: ANAND
Enter value for amount: 15500
Enter value for a_date: 18-MAR-2003
old   1: insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date')
new   1: insert into DEPOSIT values('102', 'HARSHAD', 'ANAND', '15500', '18-MAR-2003')

1 row created.

SQL> insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date');
Enter value for act_no: 105
Enter value for c_name: AESHWARY
Enter value for b_name: NADIAD
Enter value for amount: 10000
Enter value for a_date: 15-APRIL-2004
old   1: insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date')
new   1: insert into DEPOSIT values('105', 'AESHWARY', 'NADIAD', '10000', '15-APRIL-2004')

1 row created.

SQL> insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date');
Enter value for act_no: 106
Enter value for c_name: DHRUVAL
Enter value for b_name: BORSAD
Enter value for amount: 50000
Enter value for a_date: 20-SEP-2010
old   1: insert into DEPOSIT values('&act_no', '&c_name', '&b_name', '&amount', '&a_date')
new   1: insert into DEPOSIT values('106', 'DHRUVAL', 'BORSAD', '50000', '20-SEP-2010')

1 row created.
```

2) Write a query to insert values in the table of BRANCH.
   QUERY:
   insert into BRANCH values('&b_name', '&city');



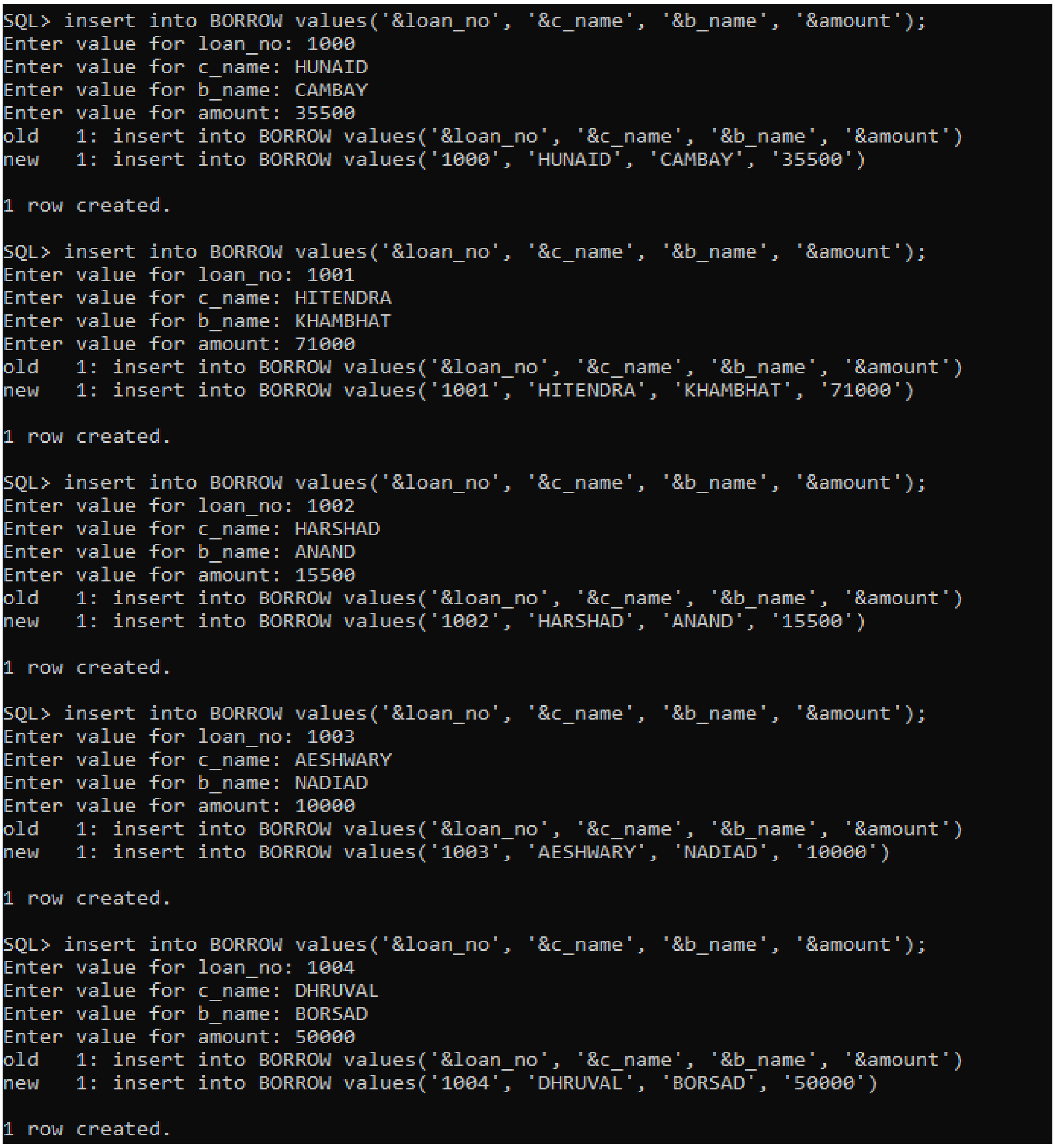
```
SQL> insert into BRANCH values('&b_name', '&city');
Enter value for b_name: CAMBAY
Enter value for city: MUMBAI
old   1: insert into BRANCH values('&b_name', '&city')
new   1: insert into BRANCH values('CAMBAY', 'MUMBAI')

1 row created.

SQL> insert into BRANCH values('&b_name', '&city');
Enter value for b_name: KHAMBHAT
Enter value for city: JAIPUR
old   1: insert into BRANCH values('&b_name', '&city')
new   1: insert into BRANCH values('KHAMBHAT', 'JAIPUR')

1 row created.

SQL> insert into BRANCH values('&b_name', '&city');
Enter value for b_name: ANAND
Enter value for city: DELHI
old   1: insert into BRANCH values('&b_name', '&city')
new   1: insert into BRANCH values('ANAND', 'DELHI')

1 row created.

SQL> insert into BRANCH values('&b_name', '&city');
Enter value for b_name: NADIAD
Enter value for city: BAKROL
old   1: insert into BRANCH values('&b_name', '&city')
new   1: insert into BRANCH values('NADIAD', 'BAKROL')

1 row created.

SQL> insert into BRANCH values('&b_name', '&city');
Enter value for b_name: BORSAD
Enter value for city: VATAO
old   1: insert into BRANCH values('&b_name', '&city')
new   1: insert into BRANCH values('BORSAD', 'VATAO')

1 row created.
```

3) Write a query to insert values in the table of CUSTOMER.
   QUERY:
   insert into CUSTOMER values('&c_name', '&city');



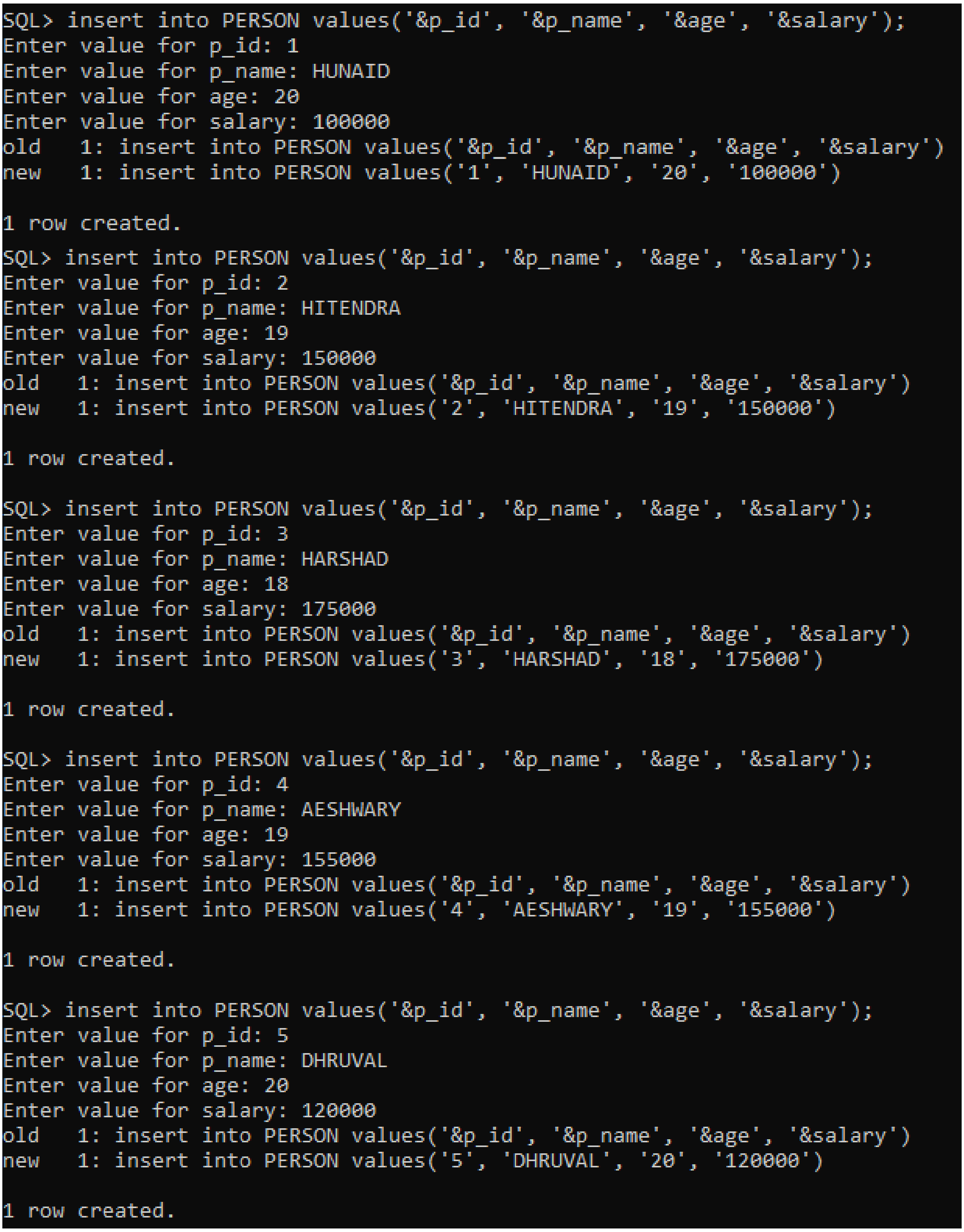
```
SQL> insert into CUSTOMER values('&c_name', '&city');
Enter value for c_name: HUNAID
Enter value for city: MUMBAI
old   1: insert into CUSTOMER values('&c_name', '&city')
new   1: insert into CUSTOMER values('HUNAID', 'MUMBAI')

1 row created.

SQL> insert into CUSTOMER values('&c_name', '&city');
Enter value for c_name: HITENDRA
Enter value for city: JAIPUR
old   1: insert into CUSTOMER values('&c_name', '&city')
new   1: insert into CUSTOMER values('HITENDRA', 'JAIPUR')

1 row created.

SQL> insert into CUSTOMER values('&c_name', '&city');
Enter value for c_name: HARSHAD
Enter value for city: DELHI
old   1: insert into CUSTOMER values('&c_name', '&city')
new   1: insert into CUSTOMER values('HARSHAD', 'DELHI')

1 row created.

SQL> insert into CUSTOMER values('&c_name', '&city');
Enter value for c_name: AESHWARY
Enter value for city: BAKROL
old   1: insert into CUSTOMER values('&c_name', '&city')
new   1: insert into CUSTOMER values('AESHWARY', 'BAKROL')

1 row created.

SQL> insert into CUSTOMER values('&c_name', '&city');
Enter value for c_name: DHRUVAL
Enter value for city: VATAO
old   1: insert into CUSTOMER values('&c_name', '&city')
new   1: insert into CUSTOMER values('DHRUVAL', 'VATAO')

1 row created.
```

4) Write a query to insert values in the table of BORROW.
   QUERY:
   insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount');



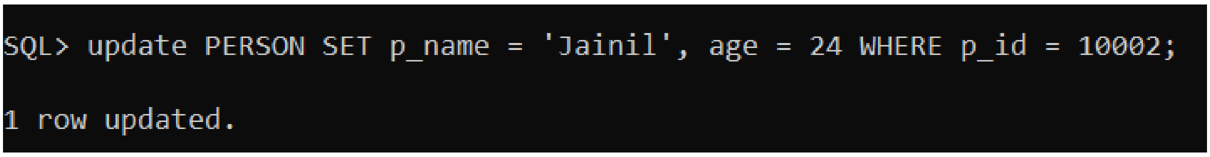
```
SQL> insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount');
Enter value for loan_no: 1000
Enter value for c_name: HUNAID
Enter value for b_name: CAMBAY
Enter value for amount: 35500
old   1: insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount')
new   1: insert into BORROW values('1000', 'HUNAID', 'CAMBAY', '35500')

1 row created.

SQL> insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount');
Enter value for loan_no: 1001
Enter value for c_name: HITENDRA
Enter value for b_name: KHAMBHAT
Enter value for amount: 71000
old   1: insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount')
new   1: insert into BORROW values('1001', 'HITENDRA', 'KHAMBHAT', '71000')

1 row created.

SQL> insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount');
Enter value for loan_no: 1002
Enter value for c_name: HARSHAD
Enter value for b_name: ANAND
Enter value for amount: 15500
old   1: insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount')
new   1: insert into BORROW values('1002', 'HARSHAD', 'ANAND', '15500')

1 row created.

SQL> insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount');
Enter value for loan_no: 1003
Enter value for c_name: AESHWARY
Enter value for b_name: NADIAD
Enter value for amount: 10000
old   1: insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount')
new   1: insert into BORROW values('1003', 'AESHWARY', 'NADIAD', '10000')

1 row created.

SQL> insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount');
Enter value for loan_no: 1004
Enter value for c_name: DHRUVAL
Enter value for b_name: BORSAD
Enter value for amount: 50000
old   1: insert into BORROW values('&loan_no', '&c_name', '&b_name', '&amount')
new   1: insert into BORROW values('1004', 'DHRUVAL', 'BORSAD', '50000')

1 row created.
```

5) Write a query to insert values in the table of PERSON.
   QUERY:
   insert into PERSON values('&p_id', '&p_name', '&age', '&salary');



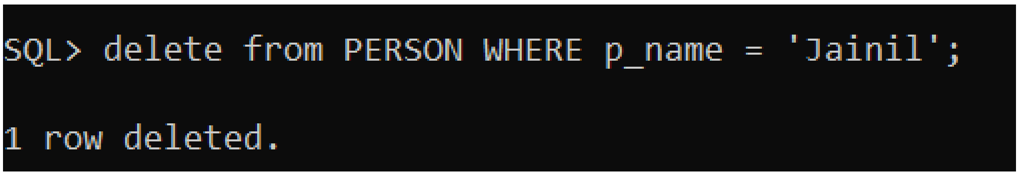
```
SQL> insert into PERSON values('&p_id', '&p_name', '&age', '&salary');
Enter value for p_id: 1
Enter value for p_name: HUNAID
Enter value for age: 20
Enter value for salary: 100000
old   1: insert into PERSON values('&p_id', '&p_name', '&age', '&salary')
new   1: insert into PERSON values('1', 'HUNAID', '20', '100000')

1 row created.
SQL> insert into PERSON values('&p_id', '&p_name', '&age', '&salary');
Enter value for p_id: 2
Enter value for p_name: HITENDRA
Enter value for age: 19
Enter value for salary: 150000
old   1: insert into PERSON values('&p_id', '&p_name', '&age', '&salary')
new   1: insert into PERSON values('2', 'HITENDRA', '19', '150000')

1 row created.

SQL> insert into PERSON values('&p_id', '&p_name', '&age', '&salary');
Enter value for p_id: 3
Enter value for p_name: HARSHAD
Enter value for age: 18
Enter value for salary: 175000
old   1: insert into PERSON values('&p_id', '&p_name', '&age', '&salary')
new   1: insert into PERSON values('3', 'HARSHAD', '18', '175000')

1 row created.

SQL> insert into PERSON values('&p_id', '&p_name', '&age', '&salary');
Enter value for p_id: 4
Enter value for p_name: AESHWARY
Enter value for age: 19
Enter value for salary: 155000
old   1: insert into PERSON values('&p_id', '&p_name', '&age', '&salary')
new   1: insert into PERSON values('4', 'AESHWARY', '19', '155000')

1 row created.

SQL> insert into PERSON values('&p_id', '&p_name', '&age', '&salary');
Enter value for p_id: 5
Enter value for p_name: DHRUVAL
Enter value for age: 20
Enter value for salary: 120000
old   1: insert into PERSON values('&p_id', '&p_name', '&age', '&salary')
new   1: insert into PERSON values('5', 'DHRUVAL', '20', '120000')

1 row created.
```

6) Write a query to update values in the table of PERSON.
QUERY:
update PERSON SET p_name = 'Jainil', age = 24 WHERE p_id = 10002;



```
SQL> update PERSON SET p_name = 'Jainil', age = 24 WHERE p_id = 10002;

1 row updated.
```

7) Write a query to delete values of the row in the table of PERSON.
QUERY:
delete from PERSON WHERE p_name = 'Jainil';

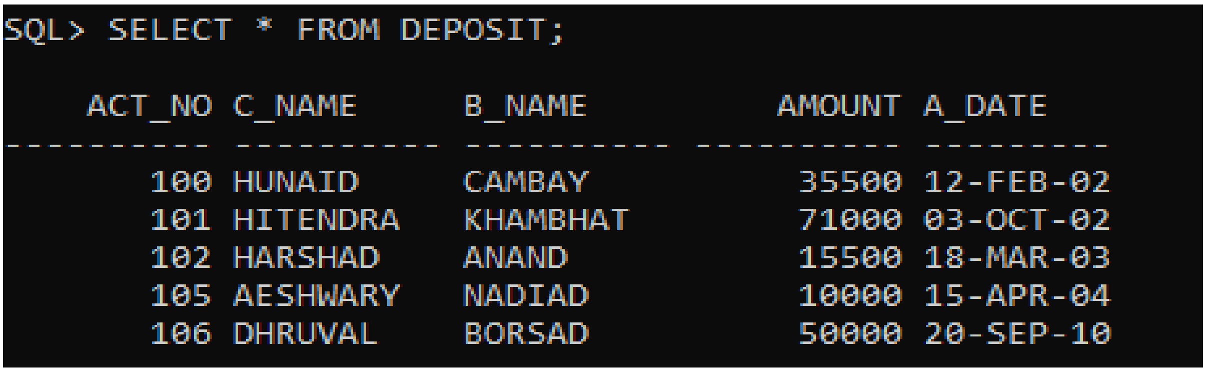


```
SQL> delete from PERSON WHERE p_name = 'Jainil';

1 row deleted.
```

PRACTICAL-3

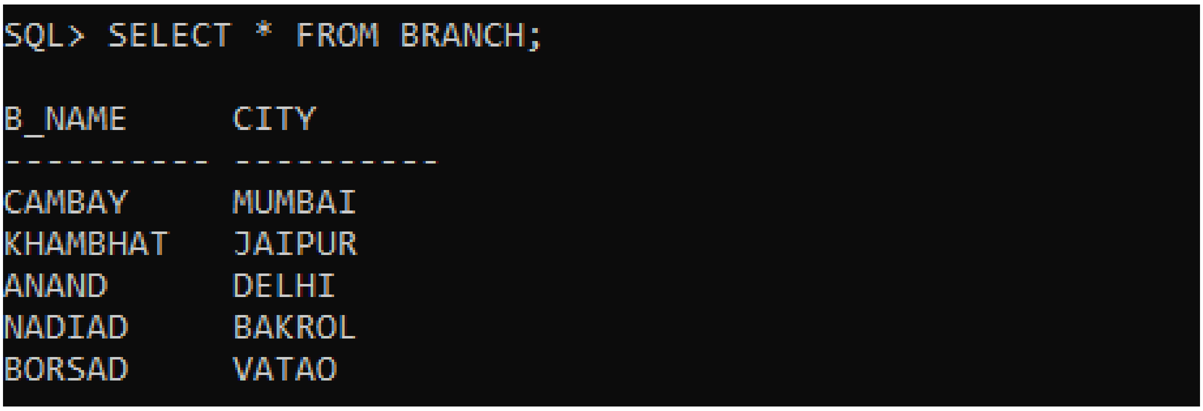
- ## Retrieving, Restricting and Sorting Data (DRL)

1) Write a query to display the details of the table of DEPOSIT.
QUERY:
select * from DEPOSIT;



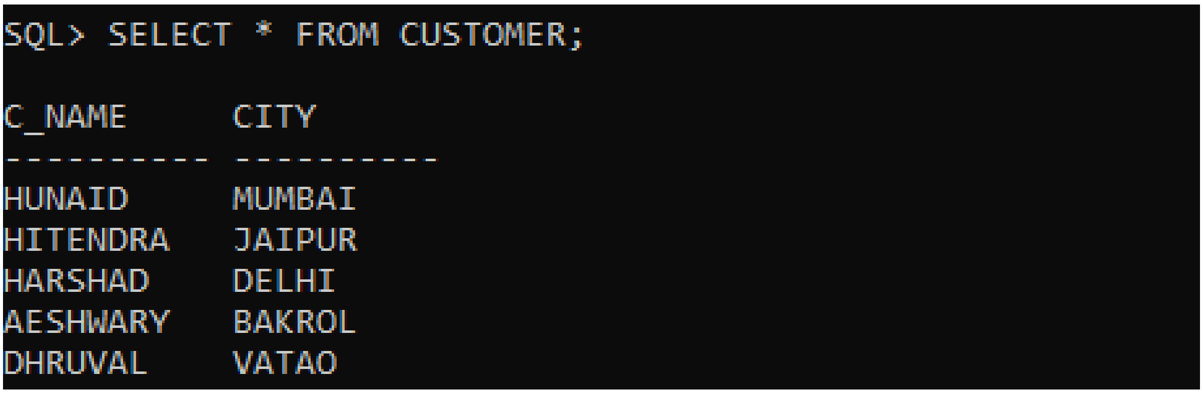
```
SQL> SELECT * FROM DEPOSIT;

    ACT_NO C_NAME     B_NAME         AMOUNT A_DATE
---------- ---------- ---------- ---------- ---------
       100 HUNAID     CAMBAY          35500 12-FEB-02
       101 HITENDRA   KHAMBHAT        71000 03-OCT-02
       102 HARSHAD    ANAND           15500 18-MAR-03
       105 AESHWARY   NADIAD          10000 15-APR-04
       106 DHRUVAL    BORSAD          50000 20-SEP-10
```

2) Write a query to display the details of the table of BRANCH.
QUERY:
select * from BRANCH;



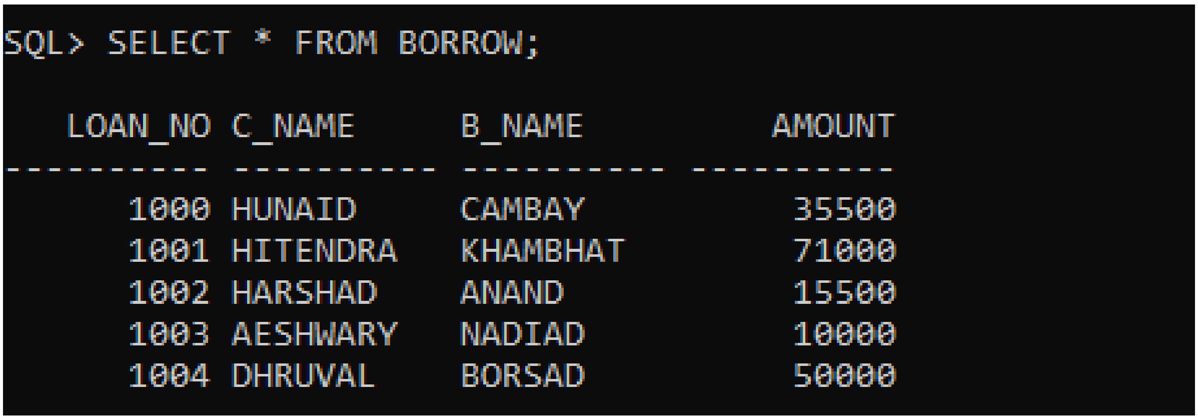
```
SQL> SELECT * FROM BRANCH;

B_NAME     CITY
---------- ----------
CAMBAY     MUMBAI
KHAMBHAT   JAIPUR
ANAND      DELHI
NADIAD     BAKROL
BORSAD     VATAO
```

3) Write a query to display the details of the table of CUSTOMER.
QUERY:
select * from CUSTOMER;



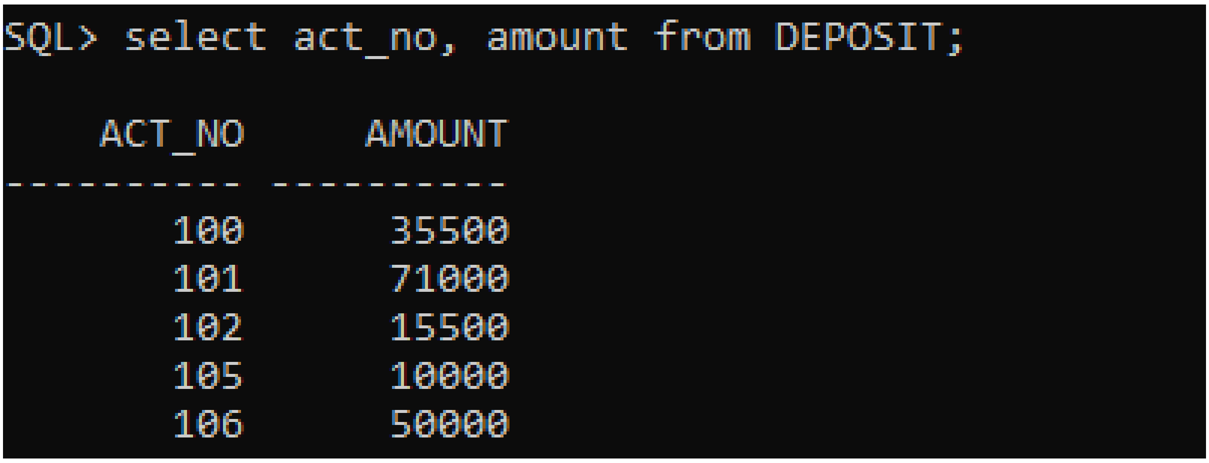
```
SQL> SELECT * FROM CUSTOMER;

C_NAME     CITY
---------- ----------
HUNAID     MUMBAI
HITENDRA   JAIPUR
HARSHAD    DELHI
AESHWARY   BAKROL
DHRUVAL    VATAO
```

4) Write a query to display the details of the table of BORROW.
QUERY:
select * from BORROW;



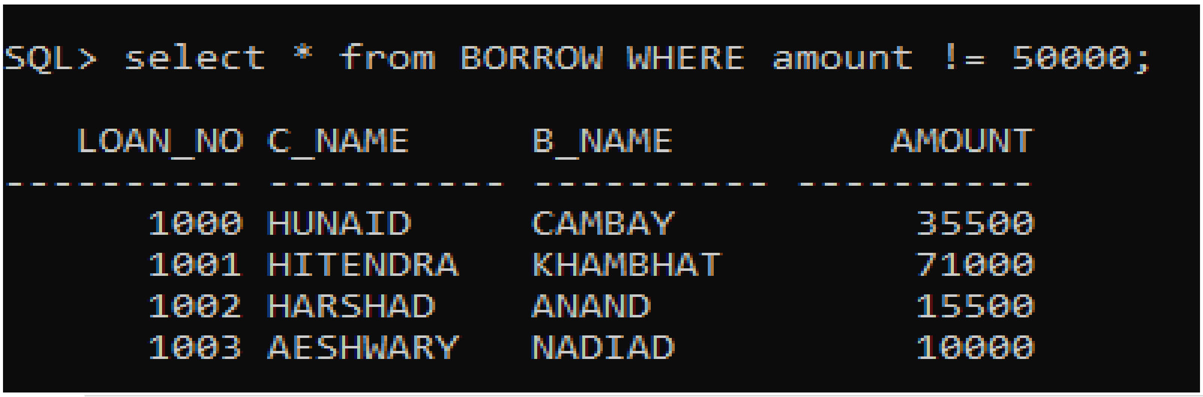
```
SQL> SELECT * FROM BORROW;

   LOAN_NO C_NAME     B_NAME         AMOUNT
---------- ---------- ---------- ----------
      1000 HUNAID     CAMBAY          35500
      1001 HITENDRA   KHAMBHAT        71000
      1002 HARSHAD    ANAND           15500
      1003 AESHWARY   NADIAD          10000
      1004 DHRUVAL    BORSAD          50000
```

5) Write a query to display all the account in DEPOSIT along with their account number and amount.
QUERY:
select act_no, amount from DEPOSIT;



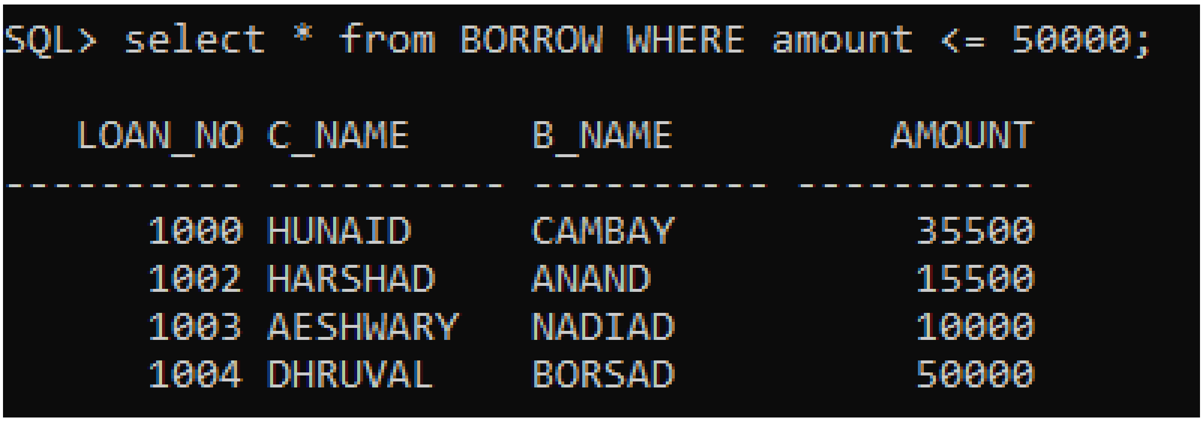
```
SQL> select act_no, amount from DEPOSIT;

    ACT_NO     AMOUNT
---------- ----------
       100      35500
       101      71000
       102      15500
       105      10000
       106      50000
```

6) Write a query to display details from BORROW where amount not equal to 50000.
QUERY:
select * from BORROW WHERE amount != 50000;



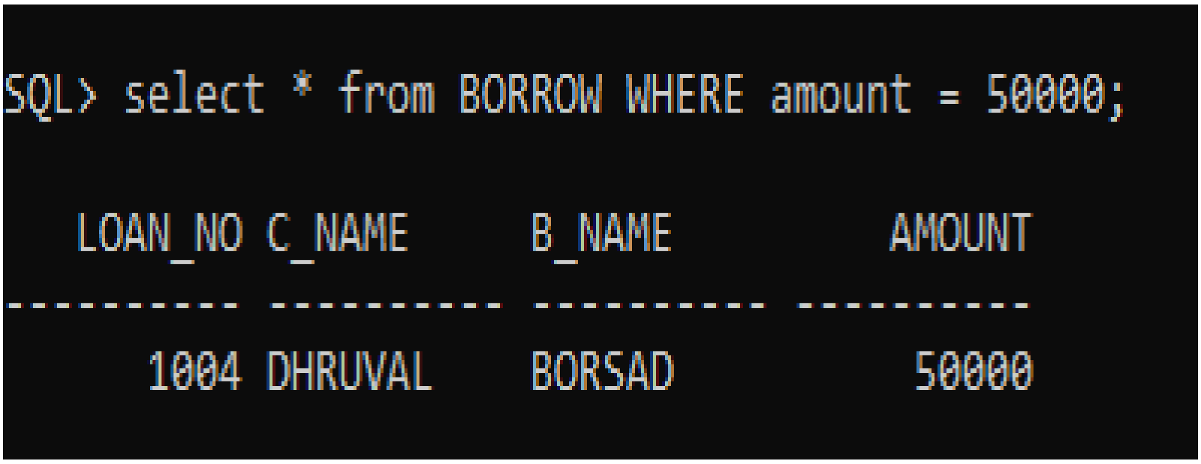
```
SQL> select * from BORROW WHERE amount != 50000;

   LOAN_NO C_NAME     B_NAME         AMOUNT
---------- ---------- ---------- ----------
      1000 HUNAID     CAMBAY          35500
      1001 HITENDRA   KHAMBHAT        71000
      1002 HARSHAD    ANAND           15500
      1003 AESHWARY   NADIAD          10000
```

7) Write a query to display details from BORROW where amount is less than or equal to 50000.
QUERY:
select * from BORROW WHERE amount <= 50000;



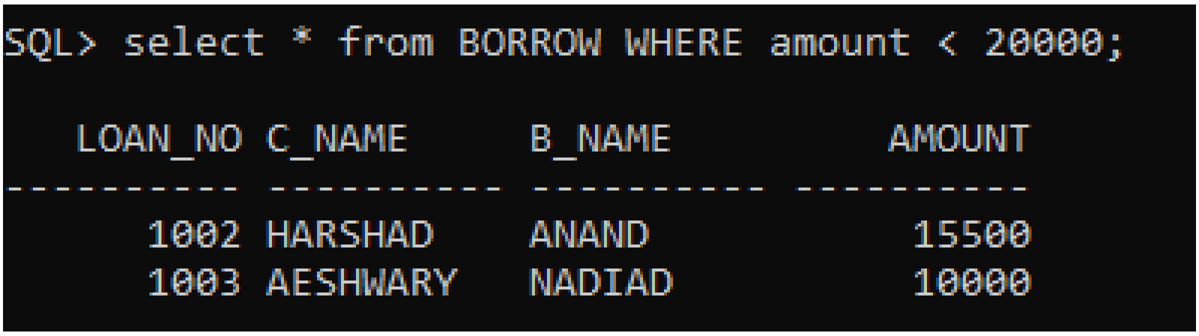
```
SQL> select * from BORROW WHERE amount <= 50000;

   LOAN_NO C_NAME     B_NAME         AMOUNT
---------- ---------- ---------- ----------
      1000 HUNAID     CAMBAY          35500
      1002 HARSHAD    ANAND           15500
      1003 AESHWARY   NADIAD          10000
      1004 DHRUVAL    BORSAD          50000
```

8) Write a query to display details from BORROW where amount equals to 50000.
QUERY:
select * from BORROW WHERE amount = 50000;



```
SQL> select * from BORROW WHERE amount = 50000;

   LOAN_NO C_NAME     B_NAME         AMOUNT
---------- ---------- ---------- ----------
      1004 DHRUVAL    BORSAD          50000
```

9) Write a query to display details from BORROW where amount is less than 20000.
QUERY:
select * from BORROW WHERE amount < 20000;

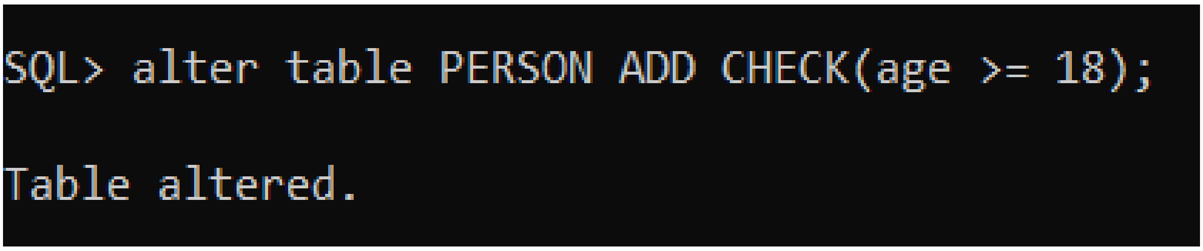


```
SQL> select * from BORROW WHERE amount < 20000;

   LOAN_NO C_NAME     B_NAME         AMOUNT
---------- ---------- ---------- ----------
      1002 HARSHAD    ANAND           15500
      1003 AESHWARY   NADIAD          10000
```

10) Write a query to check whether the entered age of person is greater than or equal to **18** by altering the table of PERSON.

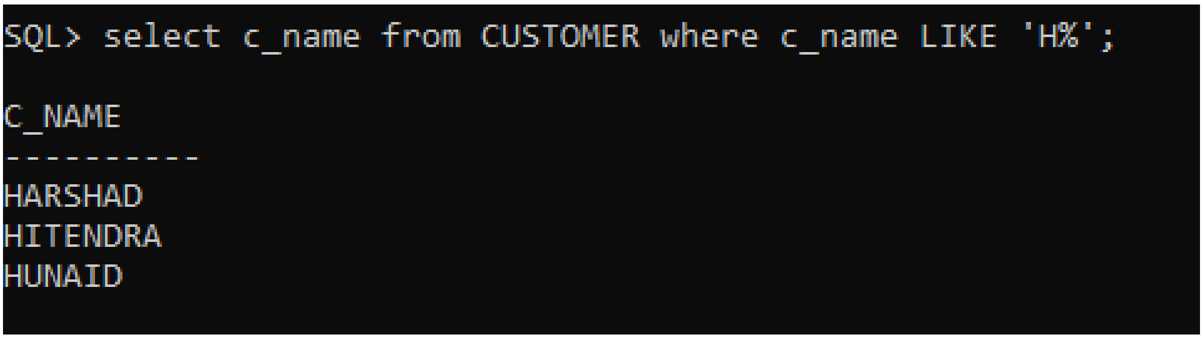
QUERY:

alter table PERSON ADD CHECK(age >= 18);



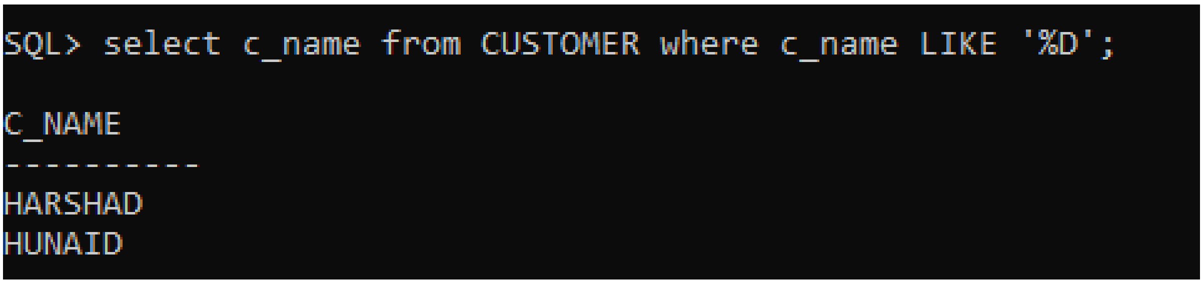
```
SQL> alter table PERSON ADD CHECK(age >= 18);

Table altered.
```

11) Write a query to find out the customer's name starting with '**H**' from the table ofCUSTOMER.
QUERY:
select c_name from CUSTOMER where c_name LIKE 'H%';



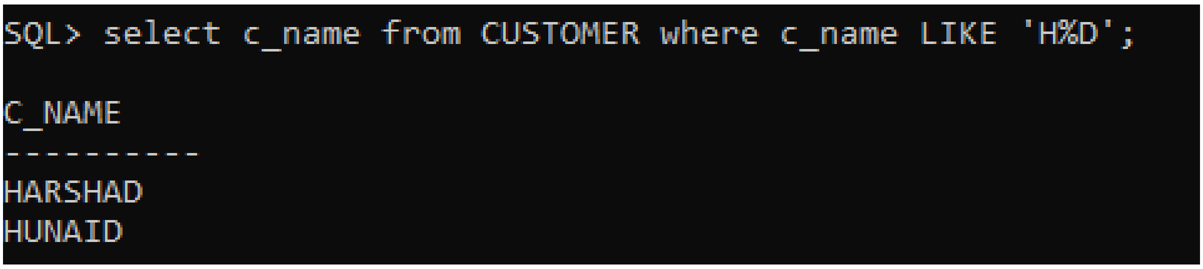
```
SQL> select c_name from CUSTOMER where c_name LIKE 'H%';

C_NAME
----------
HARSHAD
HITENDRA
HUNAID
```

12) Write a query to find out the customer's name ending with '**D**' from the table ofCUSTOMER.
QUERY:
select c_name from CUSTOMER where c_name LIKE '%D';



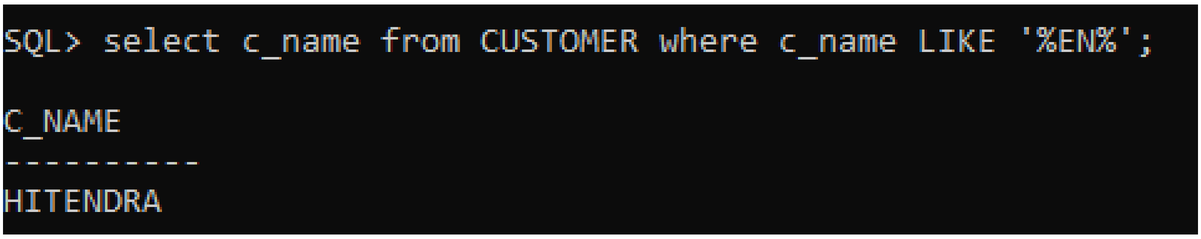
```
SQL> select c_name from CUSTOMER where c_name LIKE '%D';

C_NAME
----------
HARSHAD
HUNAID
```

13) Write a query to find out the customer's name starting with '**H**' and ending with '**D**' from the table of CUSTOMER.
QUERY:
select c_name from CUSTOMER where c_name LIKE 'H%D';



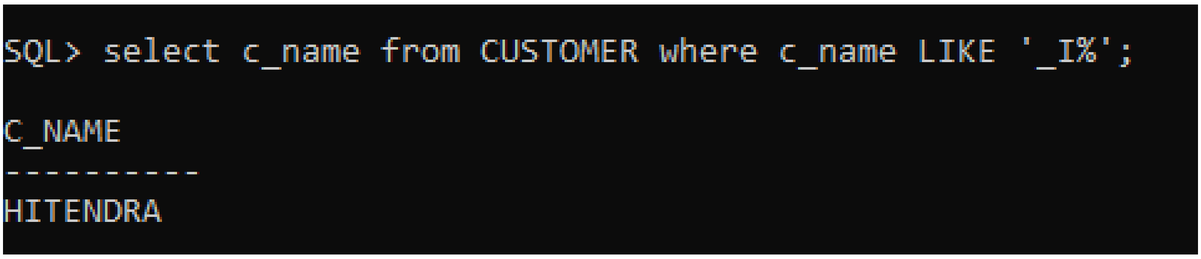
```
SQL> select c_name from CUSTOMER where c_name LIKE 'H%D';

C_NAME
----------
HARSHAD
HUNAID
```

14) Write a query to find out the customer’s name having substring ‘**EN**’ in between fromthe table of CUSTOMER.
QUERY:
select c_name from CUSTOMER where c_name LIKE '%EN%';



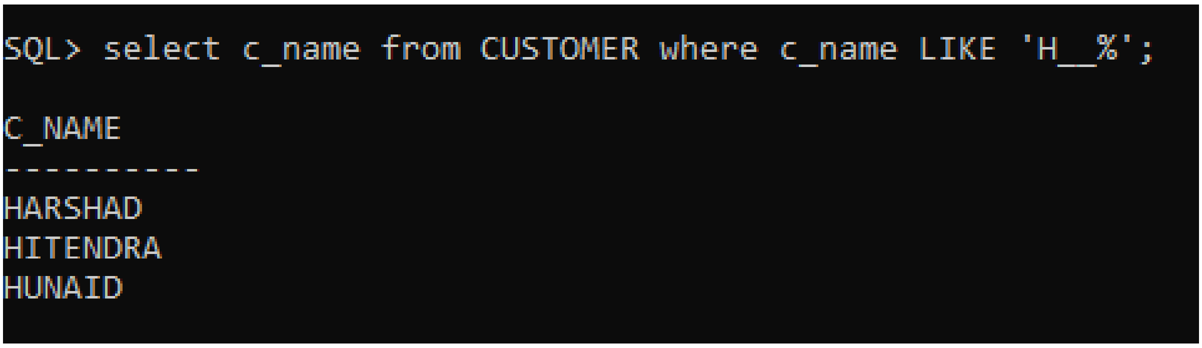
```
SQL> select c_name from CUSTOMER where c_name LIKE '%EN%';

C_NAME
----------
HITENDRA
```

15) Write a query to find out the customer’s name whose second letter is ‘**I**’ from the table of CUSTOMER.
QUERY:
select c_name from CUSTOMER where c_name LIKE '_I%';



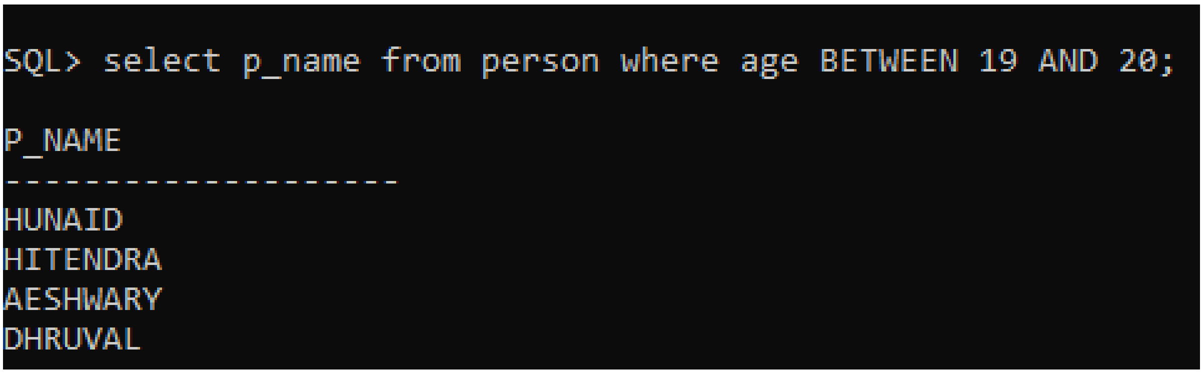
```
SQL> select c_name from CUSTOMER where c_name LIKE '_I%';

C_NAME
----------
HITENDRA
```

16) Write a query to find out the customer’s name starting with ‘**H**’ and having at least three letters from the table of CUSTOMER.
QUERY:
select c_name from CUSTOMER where c_name LIKE 'H__%';



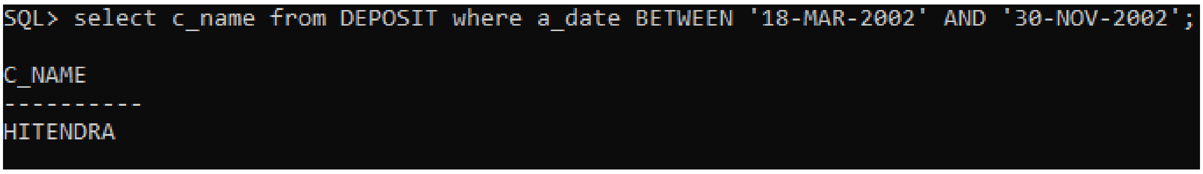
```
SQL> select c_name from CUSTOMER where c_name LIKE 'H__%';

C_NAME
----------
HARSHAD
HITENDRA
HUNAID
```

17) Write a query to find out the person’s name having age between **19** and **20** from the table of PERSON.
QUERY:
select p_name from person where age BETWEEN 19 AND 20;



```
SQL> select p_name from person where age BETWEEN 19 AND 20;

P_NAME
--------------------
HUNAID
HITENDRA
AESHWARY
DHRUVAL
```

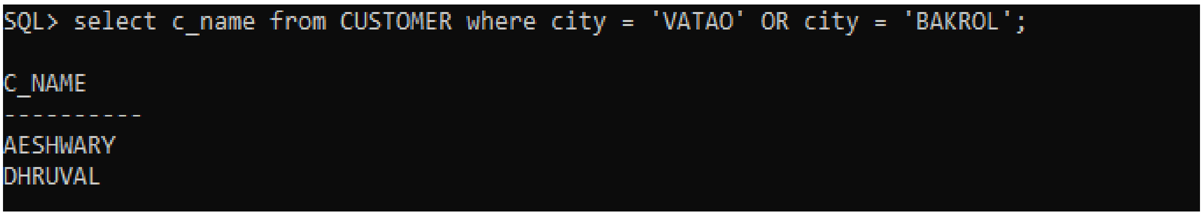
18) Write a query to find out the customer’s name who opened account between ‘**18-MAR-2020**’ and ‘**30-NOV-2021**’ from the table of DEPOSIT.
QUERY:
select c_name from DEPOSIT where a_date BETWEEN '18-MAR-2020' AND'30-NOV-2021';



```
SQL> select c_name from DEPOSIT where a_date BETWEEN '18-MAR-2002' AND '30-NOV-2002';

C_NAME
----------
HITENDRA
```

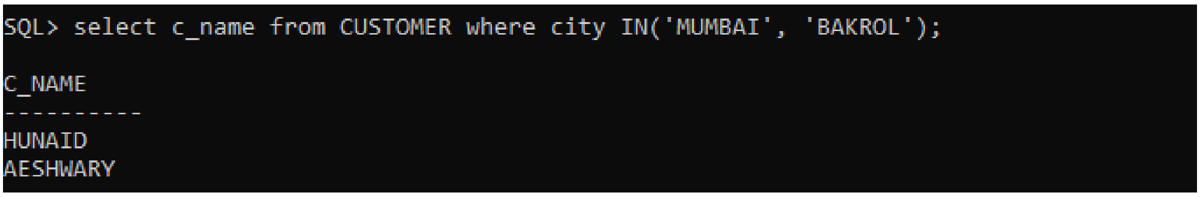
19) Write a query to find out the customer’s name who is living in city ‘**VATAO**’ or‘**BAKROL**’ from the table of CUSTOMER.

   i) Using OR.
   QUERY:
   select c_name from CUSTOMER where city = 'VATAO' OR city = 'BAKROL';



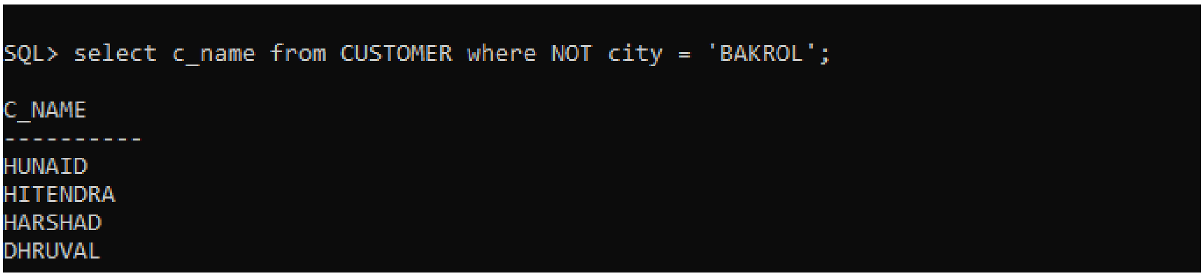
```
SQL> select c_name from CUSTOMER where city = 'VATAO' OR city = 'BAKROL';

C_NAME
----------
AESHWARY
DHRUVAL
```

ii) Using IN.
QUERY:
select c_name from CUSTOMER where city IN('MUMBAI', 'BAKROL');



```
SQL> select c_name from CUSTOMER where city IN('MUMBAI', 'BAKROL');

C_NAME
----------
HUNAID
AESHWARY
```

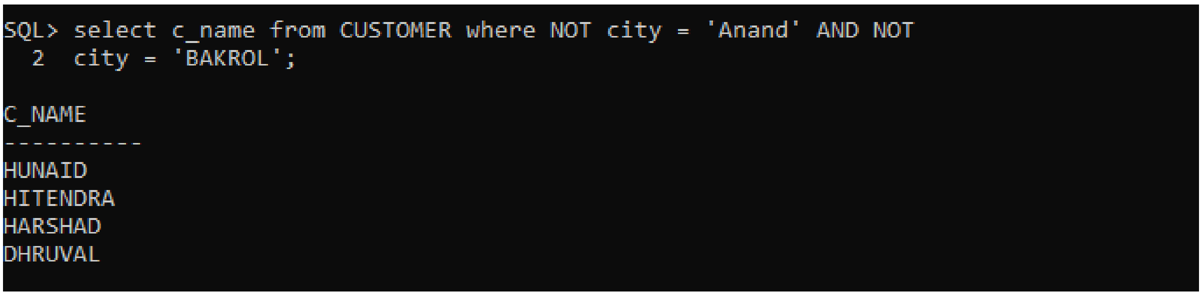
20) Write a query to find out the customer's name who is not living in city '**BAKROL**' from the table of CUSTOMER.
QUERY:
select c_name from CUSTOMER where NOT city = 'BAKROL';



```
SQL> select c_name from CUSTOMER where NOT city = 'BAKROL';

C_NAME
----------
HUNAID
HITENDRA
HARSHAD
DHRUVAL
```

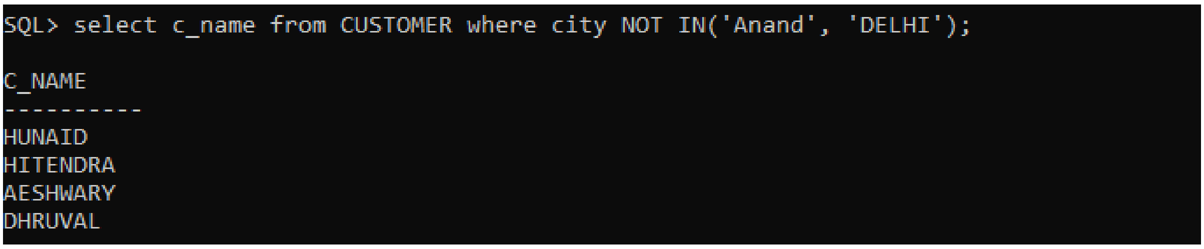
21) Write a query to find out the customer's name who is neither living in city '**Anand**' nor in '**BAKROL**' from the table of CUSTOMER.

i) Using NOT.
QUERY:
select c_name from CUSTOMER where NOT city = 'Anand' AND NOT city = 'BAKROL';



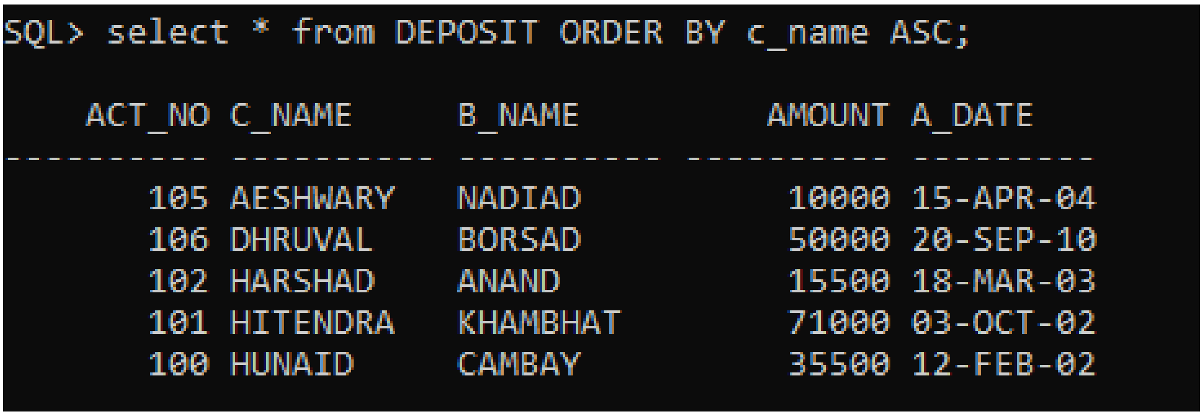
```
SQL> select c_name from CUSTOMER where NOT city = 'Anand' AND NOT
  2  city = 'BAKROL';

C_NAME
----------
HUNAID
HITENDRA
HARSHAD
DHRUVAL
```

ii) Using NOT IN.
QUERY:
select c_name from CUSTOMER where city NOT IN('Anand', 'DELHI');



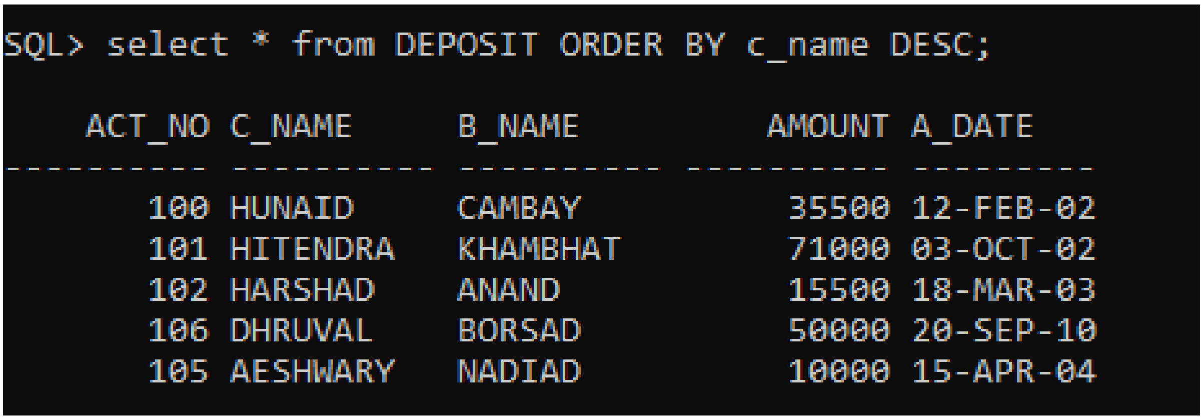
```
SQL> select c_name from CUSTOMER where city NOT IN('Anand', 'DELHI');

C_NAME
----------
HUNAID
HITENDRA
AESHWARY
DHRUVAL
```

22) Write a query to display the details of the table DEPOSIT in ascending order by name.
QUERY:
select * from DEPOSIT ORDER BY c_name ASC;



```
SQL> select * from DEPOSIT ORDER BY c_name ASC;

    ACT_NO C_NAME     B_NAME         AMOUNT A_DATE
---------- ---------- ---------- ---------- ---------
       105 AESHWARY   NADIAD          10000 15-APR-04
       106 DHRUVAL    BORSAD          50000 20-SEP-10
       102 HARSHAD    ANAND           15500 18-MAR-03
       101 HITENDRA   KHAMBHAT        71000 03-OCT-02
       100 HUNAID     CAMBAY          35500 12-FEB-02
```

23) Write a query to display the details of the table DEPOSIT in Descending order by name.
QUERY:
select * from DEPOSIT ORDER BY c_name DESC;



```
SQL> select * from DEPOSIT ORDER BY c_name DESC;

    ACT_NO C_NAME     B_NAME         AMOUNT A_DATE
---------- ---------- ---------- ---------- ---------
       100 HUNAID     CAMBAY          35500 12-FEB-02
       101 HITENDRA   KHAMBHAT        71000 03-OCT-02
       102 HARSHAD    ANAND           15500 18-MAR-03
       106 DHRUVAL    BORSAD          50000 20-SEP-10
       105 AESHWARY   NADIAD          10000 15-APR-04
```

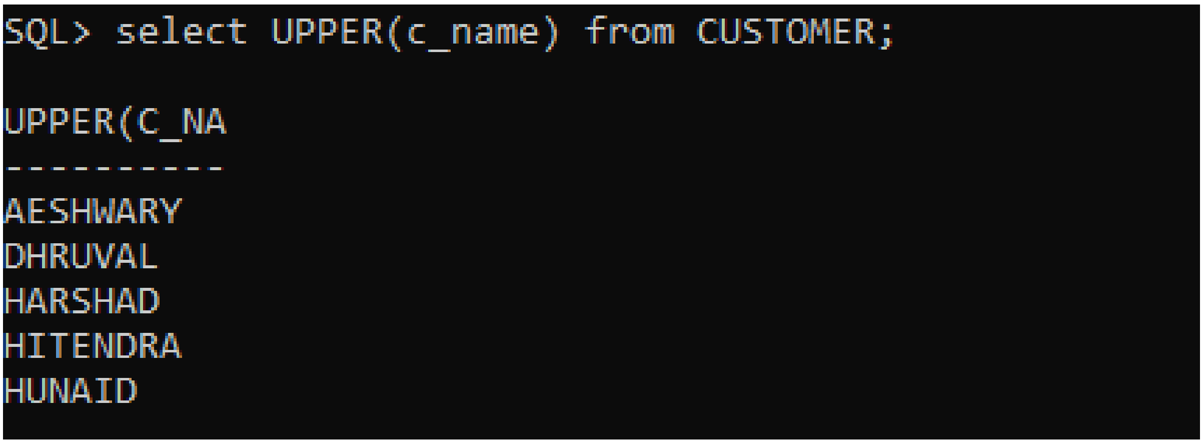
PRACTICAL-4

- ## SQL Single Row Functions

1) Write a query to convert the string in c_name to Upper Case from the table of CUSTOMER.

   QUERY:

   select UPPER(c_name) from CUSTOMER;

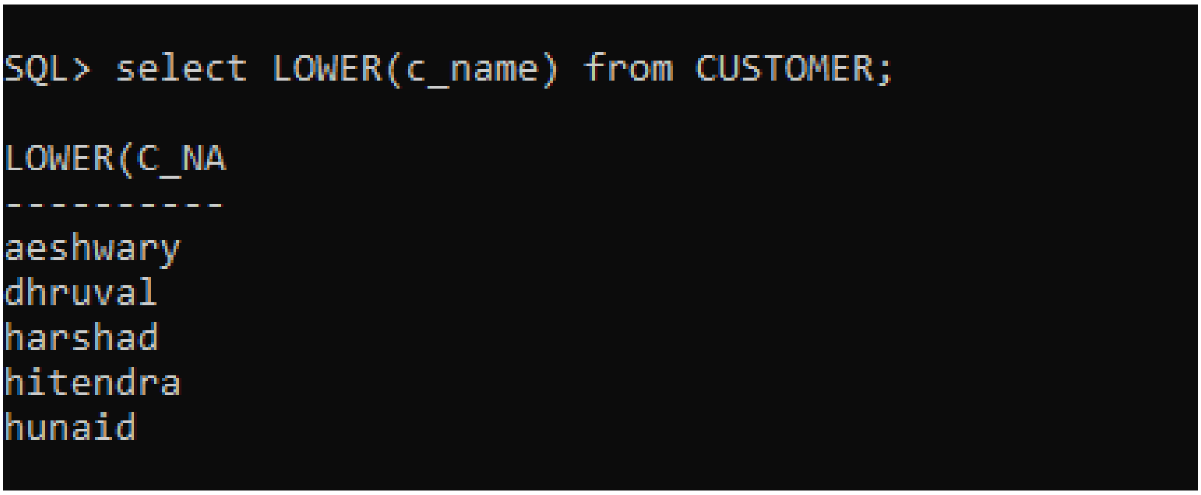


```
SQL> select UPPER(c_name) from CUSTOMER;

UPPER(C_NA
----------
AESHWARY
DHRUVAL
HARSHAD
HITENDRA
HUNAID
```

2) Write a query to convert the string in c_name to Lower Case from the table of CUSTOMER.

   QUERY:

   select LOWER(c_name) from CUSTOMER;

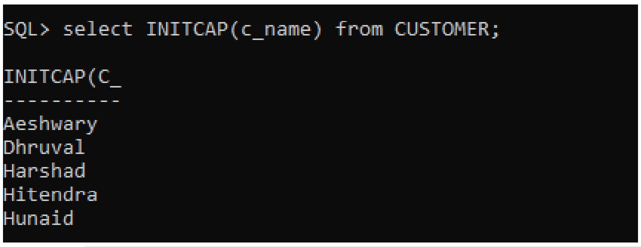


```
SQL> select LOWER(c_name) from CUSTOMER;

LOWER(C_NA
----------
aeshwary
dhruval
harshad
hitendra
hunaid
```

3) Write a query to convert the string in c_name by Capping Initial Letter from the table of CUSTOMER.

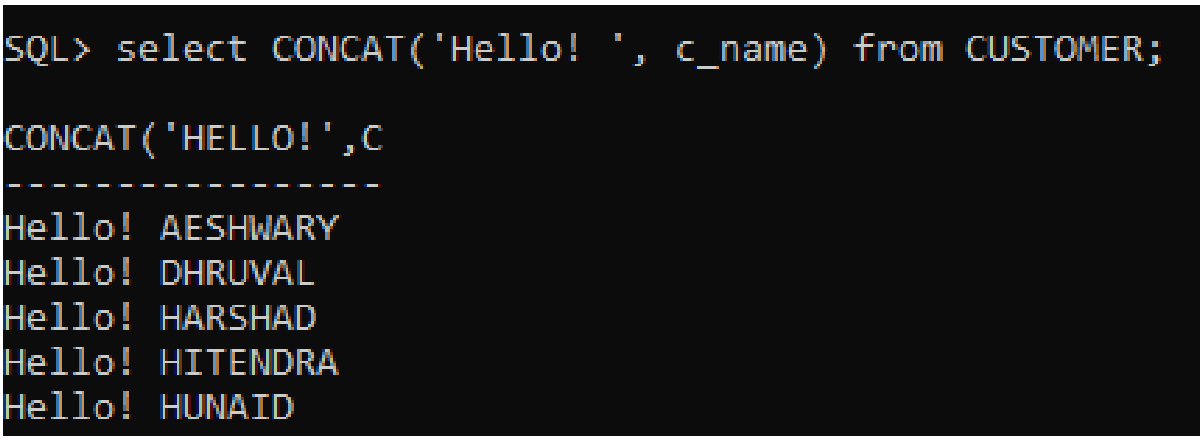
   QUERY:

   select INITCAP(c_name) from CUSTOMER;



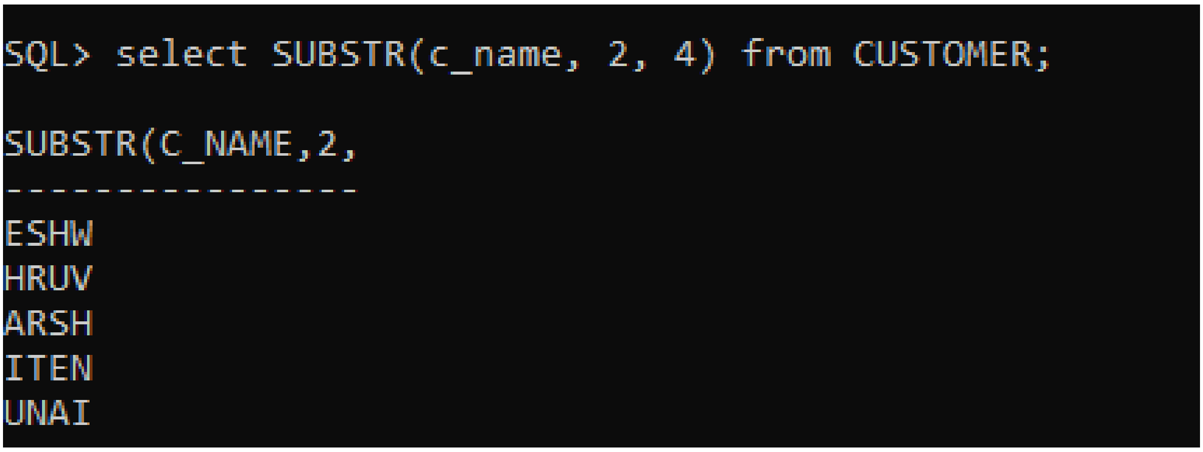
```
SQL> select INITCAP(c_name) from CUSTOMER;

INITCAP(C_
----------
Aeshwary
Dhruval
Harshad
Hitendra
Hunaid
```

4) Write a query to concatenate string ‘Hello! ‘ and string in c_name from the table of CUSTOMER.
QUERY:
select CONCAT('Hello! ', c_name) from CUSTOMER;



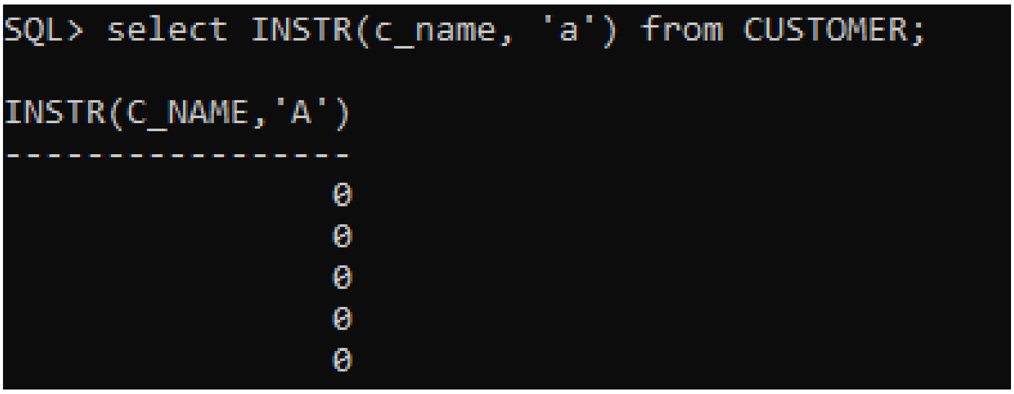
```
SQL> select CONCAT('Hello! ', c_name) from CUSTOMER;

CONCAT('HELLO!',C
-----------------
Hello! AESHWARY
Hello! DHRUVAL
Hello! HARSHAD
Hello! HITENDRA
Hello! HUNAID
```

5) Write a query to create substring starting from **2nd** position and having size of **4** from c_name from the table of CUSTOMER.
QUERY:
select SUBSTR(c_name, 2, 4) from CUSTOMER;



```
SQL> select SUBSTR(c_name, 2, 4) from CUSTOMER;

SUBSTR(C_NAME,2,
----------------
ESHW
HRUV
ARSH
ITEN
UNAI
```

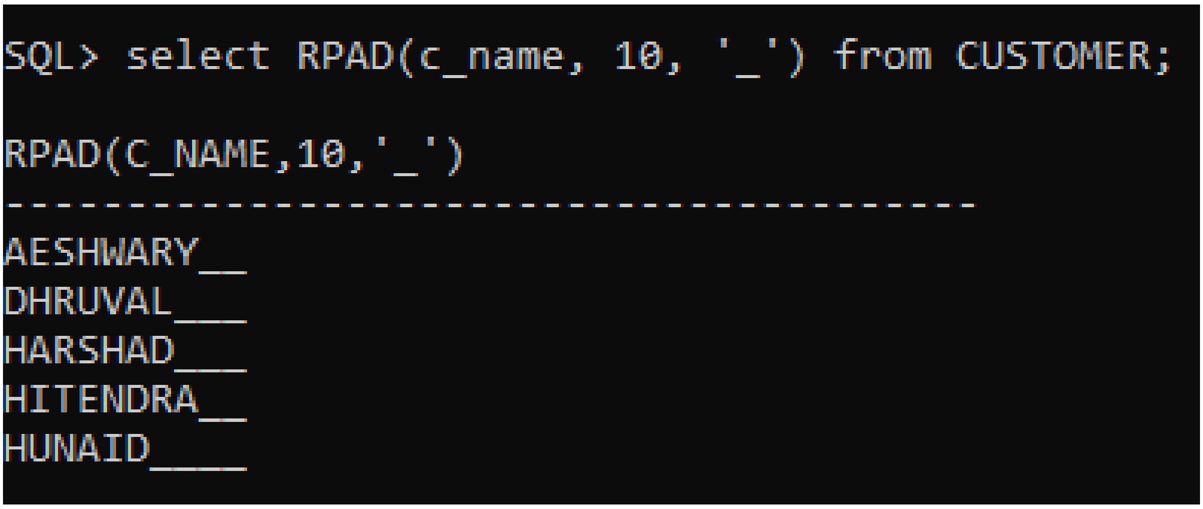
6) Write a query to find out the position of character ‘**a**’ of c_name from the table of CUSTOMER.
QUERY:
select INSTR(c_name, 'a') from CUSTOMER;



```
SQL> select INSTR(c_name, 'a') from CUSTOMER;

INSTR(C_NAME,'A')
-----------------
                0
                0
                0
                0
                0
```

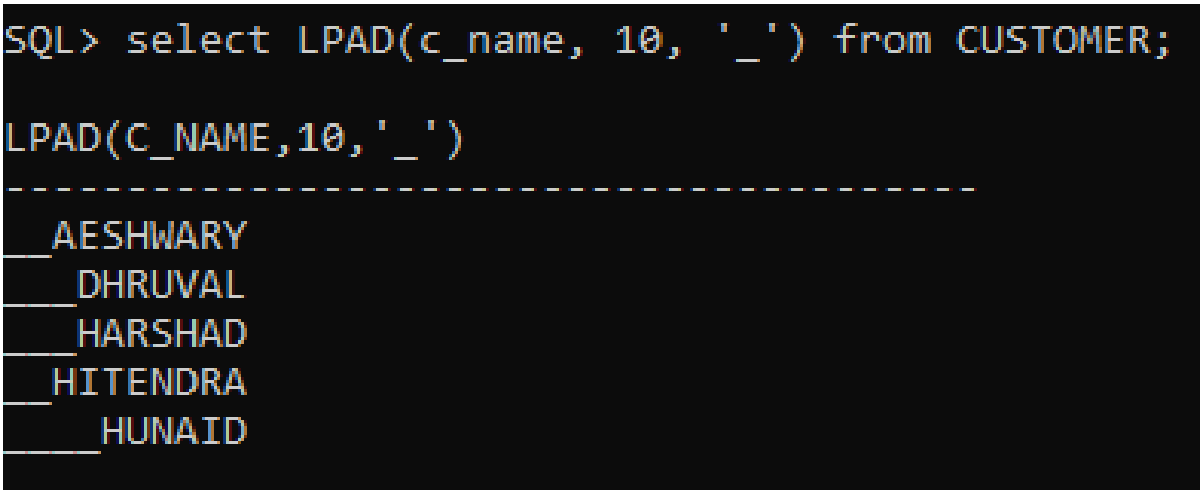
7) Write a query to fill remaining places (padding) with '_' of c_name having string size of **10** from the table of CUSTOMER.

   i) Using RPAD (Right Padding).
   QUERY:
   select RPAD(c_name, 10, '_') from CUSTOMER;



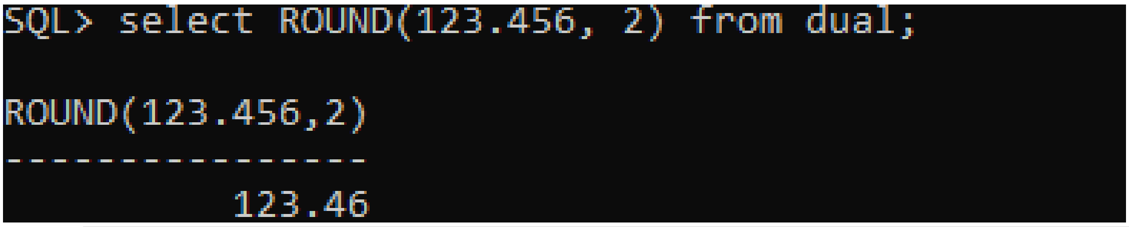
```
SQL> select RPAD(c_name, 10, '_') from CUSTOMER;

RPAD(C_NAME,10,'_')
----------------------------------------
AESHWARY__
DHRUVAL___
HARSHAD___
HITENDRA__
HUNAID____
```

   ii) Using LPAD (Left Padding).
   QUERY:
   select LPAD(c_name, 10, '_') from CUSTOMER;



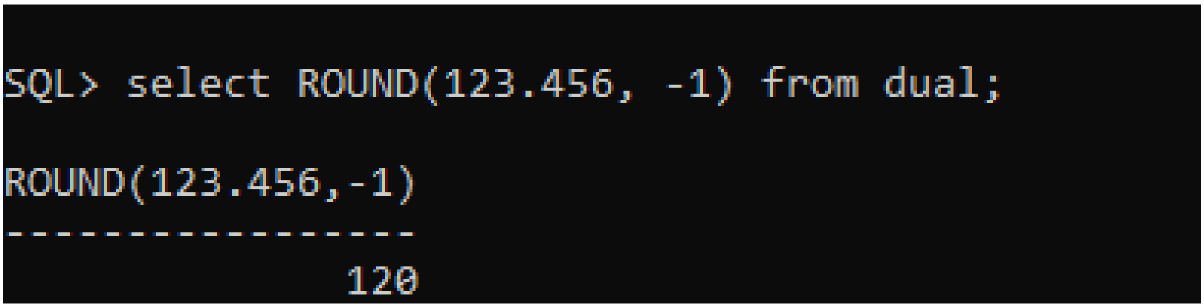
```
SQL> select LPAD(c_name, 10, '_') from CUSTOMER;

LPAD(C_NAME,10,'_')
----------------------------------------
__AESHWARY
___DHRUVAL
___HARSHAD
__HITENDRA
____HUNAID
```

8) Write a query to round the number **123.456** to **2** decimal place.
QUERY:
select ROUND(123.456, 2) from dual;



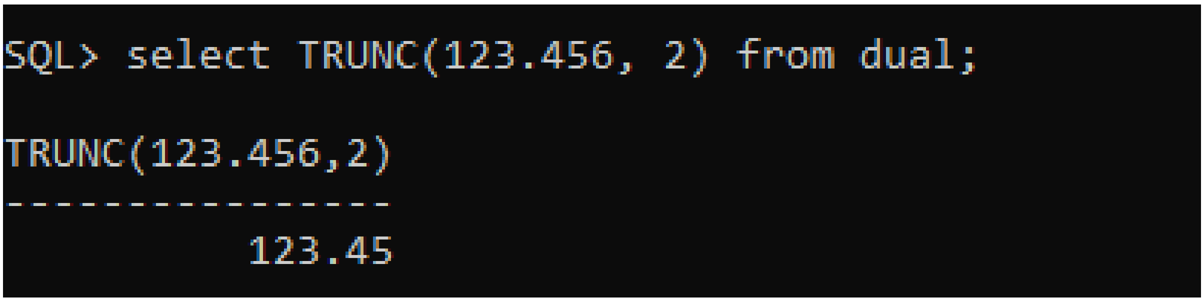
```
SQL> select ROUND(123.456, 2) from dual;

ROUND(123.456,2)
----------------
          123.46
```

9) Write a query to round the number **123.456** to **-1** decimal place.
QUERY:
select ROUND(123.456, -1) from dual;



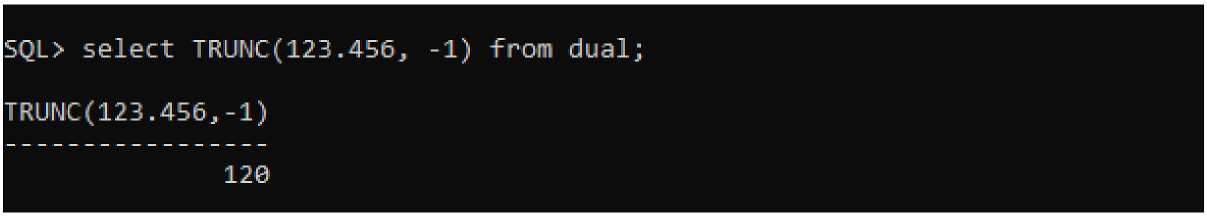
```
SQL> select ROUND(123.456, -1) from dual;

ROUND(123.456,-1)
-----------------
              120
```

10) Write a query to truncate the number **123.456** to **2** decimal place.
QUERY:
select TRUNC(123.456, 2) from dual;



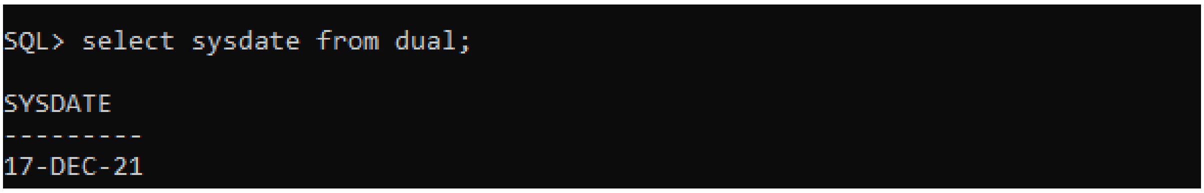
```
SQL> select TRUNC(123.456, 2) from dual;

TRUNC(123.456,2)
----------------
          123.45
```

11) Write a query to truncate the number **123.456** to **-1** decimal place.
QUERY:
select TRUNC(123.456, -1) from dual;



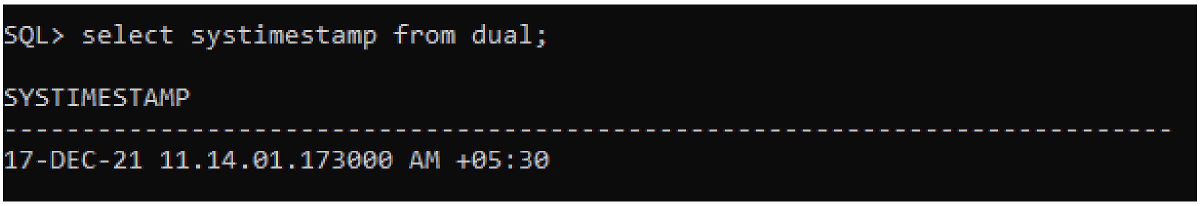
```
SQL> select TRUNC(123.456, -1) from dual;

TRUNC(123.456,-1)
-----------------
              120
```

12) Write a query to display the current date of the database.
QUERY:
select sysdate from dual;



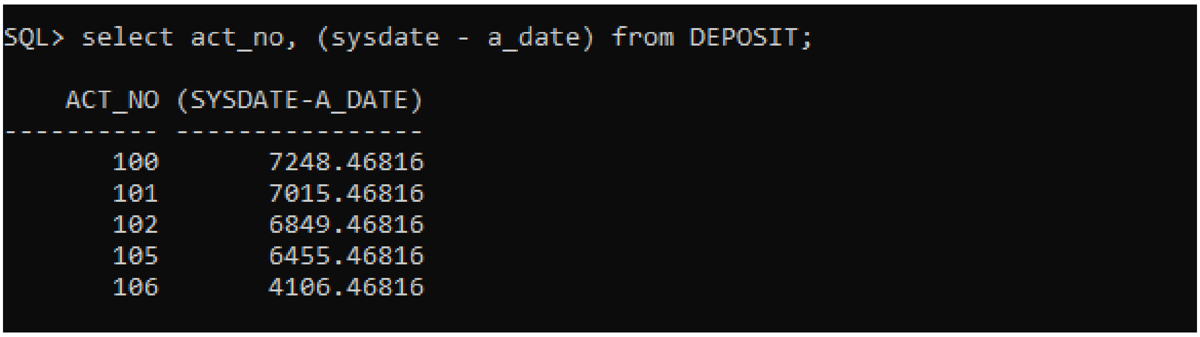
```
SQL> select sysdate from dual;

SYSDATE
---------
17-DEC-21
```

13) Write a query to display the current time of the database.
QUERY:
select systimestamp from dual;



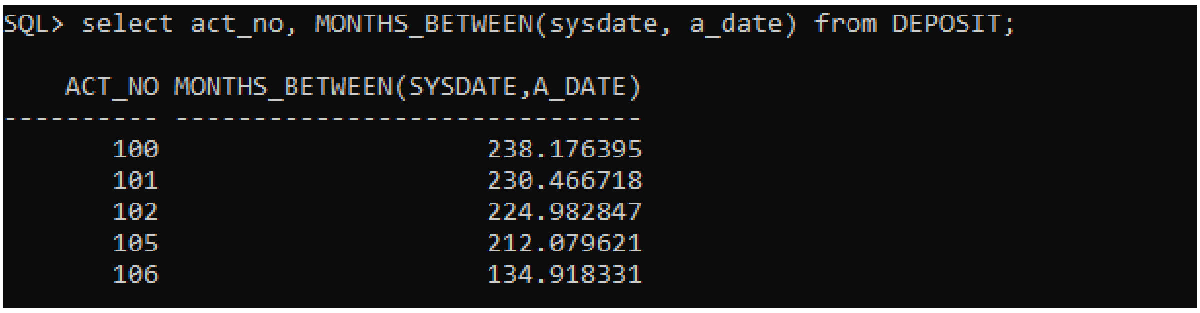
```
SQL> select systimestamp from dual;

SYSTIMESTAMP
---------------------------------------------------------------------------
17-DEC-21 11.14.01.173000 AM +05:30
```

14) Write a query to find out the customer's account number and since how many days that customer has opened their account from the table of DEPOSIT.
QUERY:
select act_no, (sysdate - a_date) from DEPOSIT;



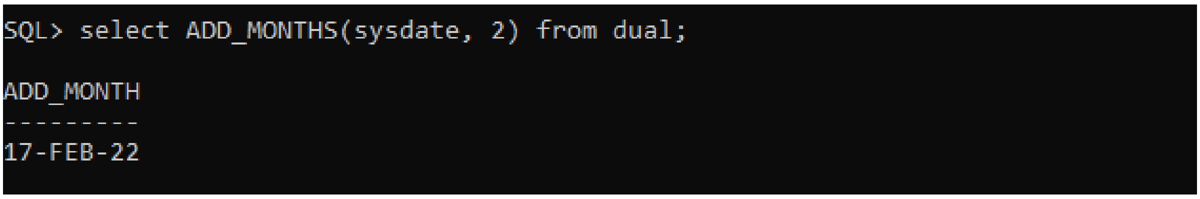
```
SQL> select act_no, (sysdate - a_date) from DEPOSIT;

    ACT_NO (SYSDATE-A_DATE)
---------- ----------------
       100       7248.46816
       101       7015.46816
       102       6849.46816
       105       6455.46816
       106       4106.46816
```

15) Write a query to find out the customer's account number and since how many months that customer has opened their account from the table of DEPOSIT.
QUERY:
select act_no, MONTHS_BETWEEN(sysdate, a_date) from DEPOSIT;



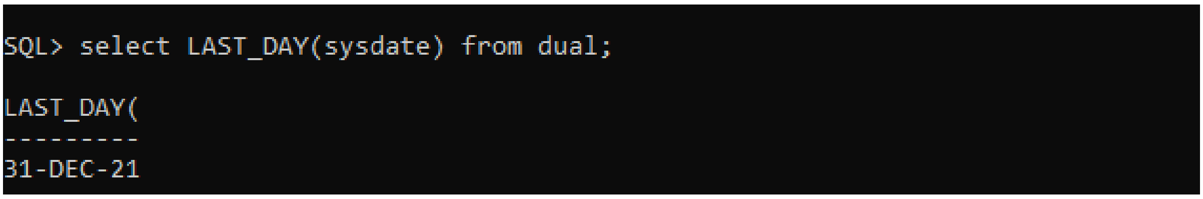
```
SQL> select act_no, MONTHS_BETWEEN(sysdate, a_date) from DEPOSIT;

    ACT_NO MONTHS_BETWEEN(SYSDATE,A_DATE)
---------- ------------------------------
       100                     238.176395
       101                     230.466718
       102                     224.982847
       105                     212.079621
       106                     134.918331
```

16) Write a query to find out the resultant month by adding **2** months to the current month from the system.
QUERY:
select ADD_MONTHS(sysdate, 2) from dual;



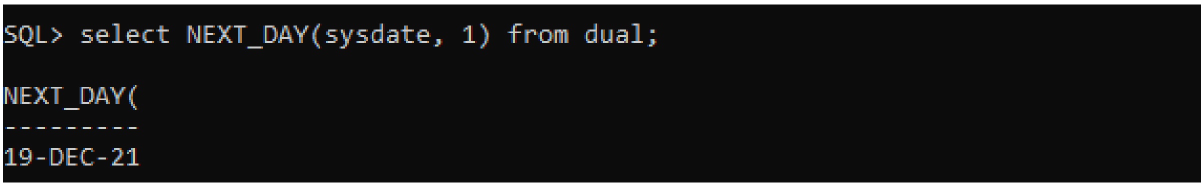
```
SQL> select ADD_MONTHS(sysdate, 2) from dual;

ADD_MONTH
---------
17-FEB-22
```

17) Write a query to find out the last day of month from the system.
QUERY:
select LAST_DAY(sysdate) from dual;



```
SQL> select LAST_DAY(sysdate) from dual;

LAST_DAY(
---------
31-DEC-21
```

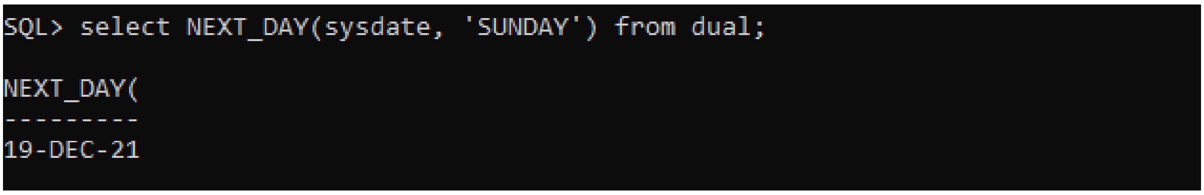
18) Write a query to find out the date of next **Sunday** respective to the current date from system.
QUERY:
select NEXT_DAY(sysdate, 1) from dual;



```
SQL> select NEXT_DAY(sysdate, 1) from dual;

NEXT_DAY(
---------
19-DEC-21
```

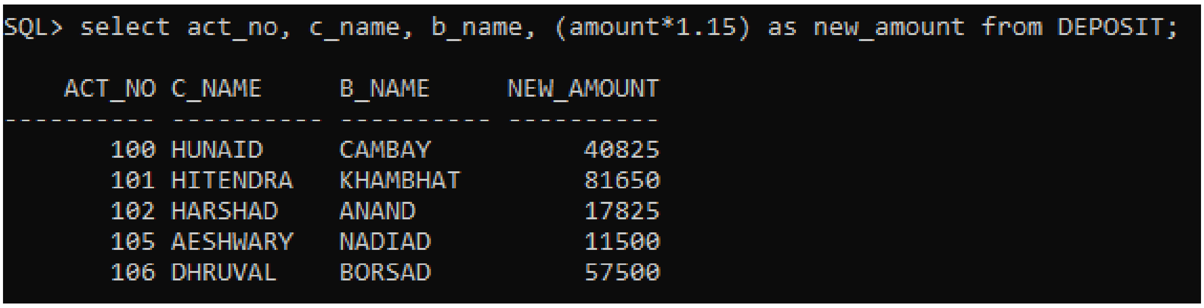
OR

select NEXT_DAY(sysdate, 'SUNDAY') from dual;



```
SQL> select NEXT_DAY(sysdate, 'SUNDAY') from dual;

NEXT_DAY(
---------
19-DEC-21
```

19) Write a query to display the act_no, c_name, b_name from DEPOSIT and amount increase by 15% and label the column name as ’new_amount’.
QUERY:
select act_no, c_name, b_name, (amount*1.15) as new_amount from DEPOSIT;

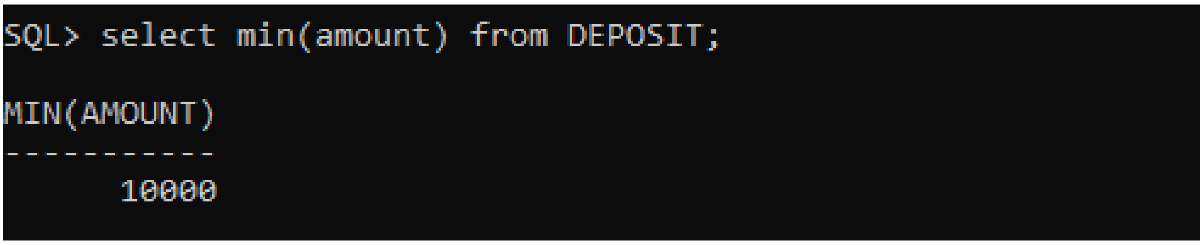


```
SQL> select act_no, c_name, b_name, (amount*1.15) as new_amount from DEPOSIT;

    ACT_NO C_NAME     B_NAME     NEW_AMOUNT
---------- ---------- ---------- ----------
       100 HUNAID     CAMBAY          40825
       101 HITENDRA   KHAMBHAT        81650
       102 HARSHAD    ANAND           17825
       105 AESHWARY   NADIAD          11500
       106 DHRUVAL    BORSAD          57500
```

PRACTICAL-5

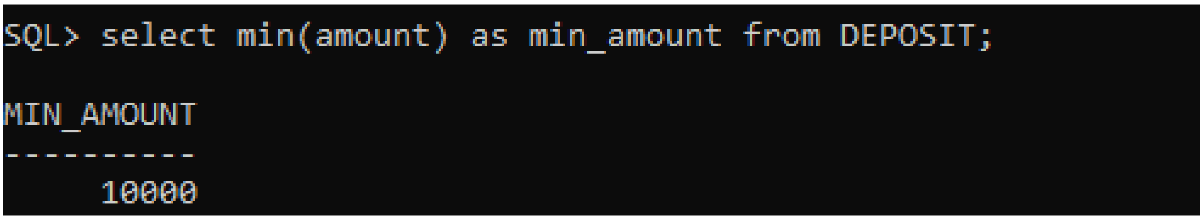
- ## SQL Multiple Row Functions (Aggregate Function)

1) Write a query to display minimum amount from DEPOSIT.
   QUERY:
   select min(amount) from DEPOSIT;



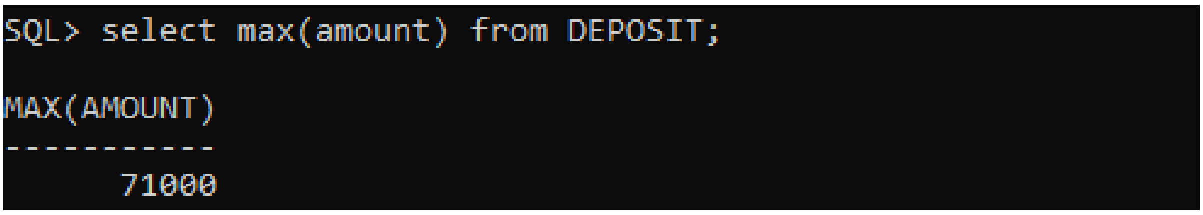
```
SQL> select min(amount) from DEPOSIT;

MIN(AMOUNT)
-----------
      10000
```

2) Write a query to display minimum amount from DEPOSIT and label it as ‘min_amount’.
   QUERY:
   select min(amount) as min_amount from DEPOSIT;



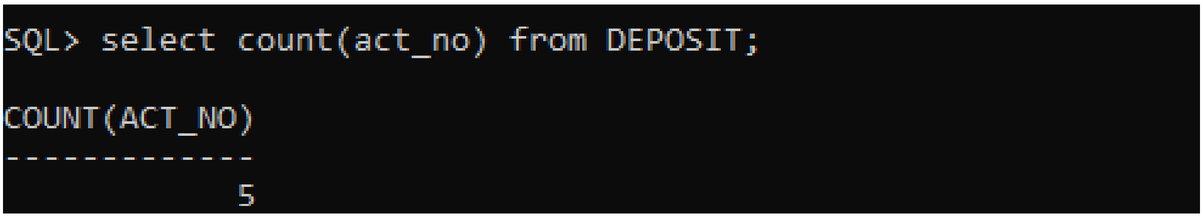
```
SQL> select min(amount) as min_amount from DEPOSIT;

MIN_AMOUNT
----------
     10000
```

3) Write a query to display maximum amount from DEPOSIT.
   QUERY:
   select max(amount) from DEPOSIT;



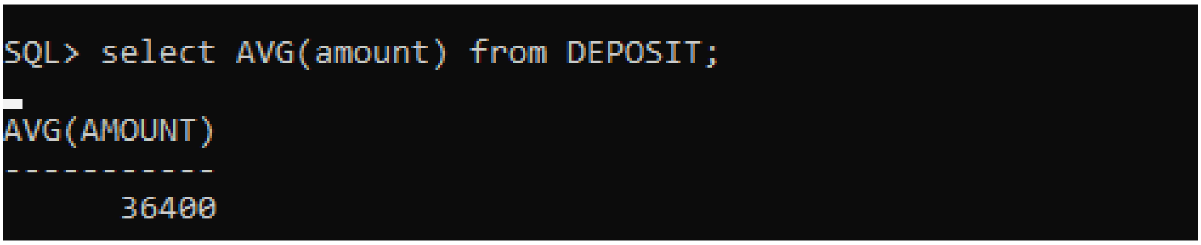
```
SQL> select max(amount) from DEPOSIT;

MAX(AMOUNT)
-----------
      71000
```

4) Write a query to display the total number of accounts from the table DEPOSIT.
QUERY:
select count(act_no) from DEPOSIT;



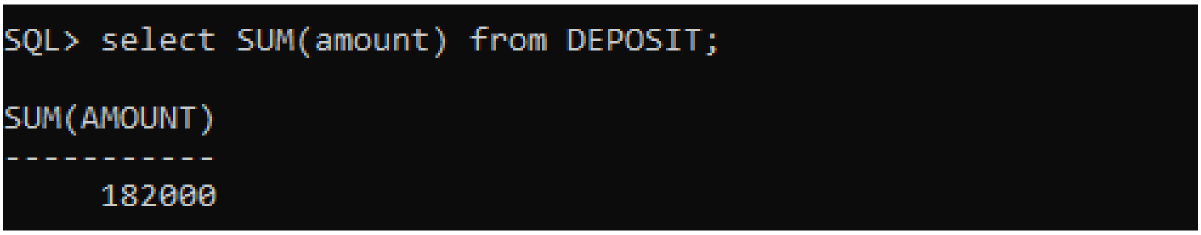
```
SQL> select count(act_no) from DEPOSIT;

COUNT(ACT_NO)
-------------
            5
```

5) Write a query to display the average amount from DEPOSIT.
QUERY:
select AVG(amount) from DEPOSIT;



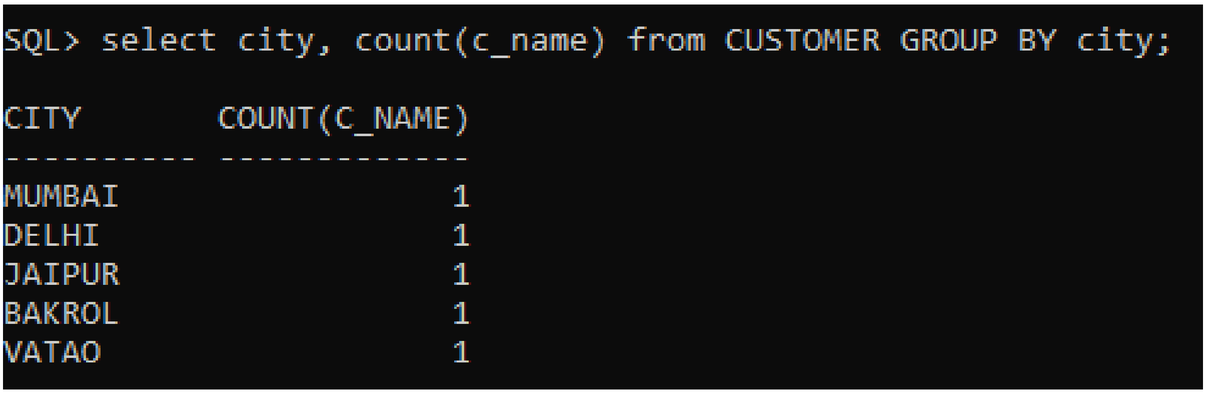
```
SQL> select AVG(amount) from DEPOSIT;

AVG(AMOUNT)
-----------
      36400
```

6) Write a query to display the sum of amount from DEPOSIT.
QUERY:
select SUM(amount) from DEPOSIT;



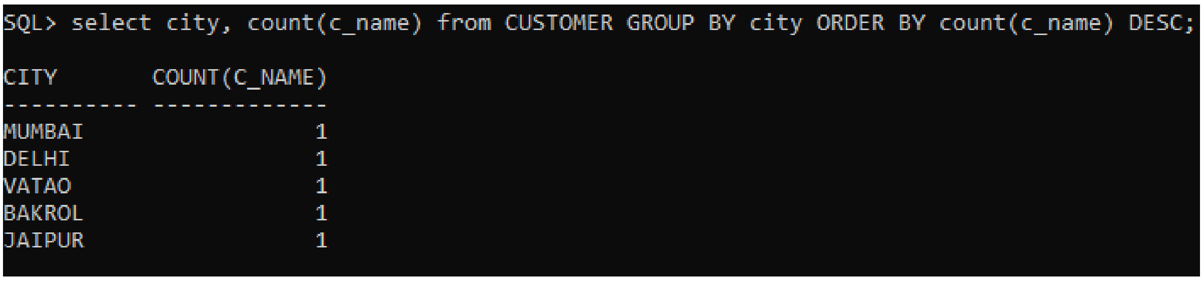
```
SQL> select SUM(amount) from DEPOSIT;

SUM(AMOUNT)
-----------
     182000
```

7) Write a query to list out the number of customers in each city from the table of CUSTOMER.
QUERY:
select city, count(c_name) from CUSTOMER GROUP BY city;



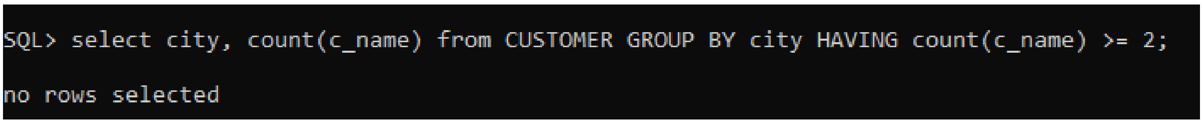
```
SQL> select city, count(c_name) from CUSTOMER GROUP BY city;

CITY       COUNT(C_NAME)
---------- -------------
MUMBAI                 1
DELHI                  1
JAIPUR                 1
BAKROL                 1
VATAO                  1
```

8) Write a query to list out the number of customers in each city sorted high to low from the table of CUSTOMER.
QUERY:
select city, count(c_name) from CUSTOMER GROUP BY city ORDER BY count(c_name)DESC;



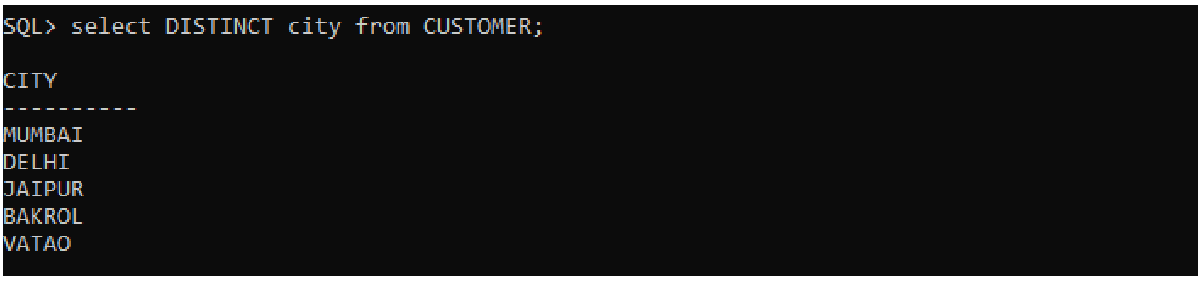
```
SQL> select city, count(c_name) from CUSTOMER GROUP BY city ORDER BY count(c_name) DESC;

CITY       COUNT(C_NAME)
---------- -------------
MUMBAI                 1
DELHI                  1
VATAO                  1
BAKROL                 1
JAIPUR                 1
```

9) Write a query to list out the number of customers living in same cities from the table of CUSTOMER.
QUERY:
select city, count(c_name) from CUSTOMER GROUP BY city HAVING count(c_name) >= 2;



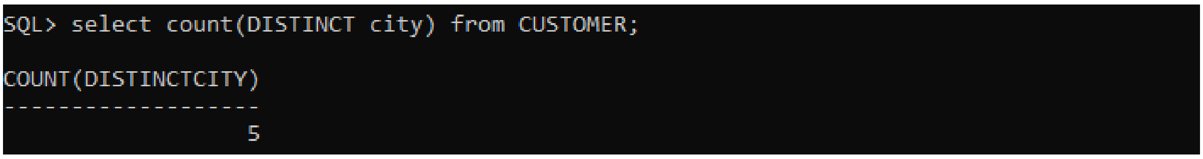
```
SQL> select city, count(c_name) from CUSTOMER GROUP BY city HAVING count(c_name) >= 2;

no rows selected
```

10) Write a query to display the name of distinct cities from the table of CUSTOMER.
QUERY:
select DISTINCT city from CUSTOMER;



```
SQL> select DISTINCT city from CUSTOMER;

CITY
----------
MUMBAI
DELHI
JAIPUR
BAKROL
VATAO
```

11) Write a query to display the number of distinct cities from the table of CUSTOMER.
QUERY:
select count(DISTINCT city) from CUSTOMER;



```
SQL> select count(DISTINCT city) from CUSTOMER;

COUNT(DISTINCTCITY)
-------------------
                  5
```