DBMS LAB REPORT

NAME: AVIROOP PAUL

ROLL NUMBER: 20051136

SECTION: CSE-22

LAB-1

```
CREATE TABLE Deposit2005040 (
   ActNo varchar2(5),
   CName varchar2(20),
   BName varchar2(20),
   Amount number(8,2),
   Adate date
);

CREATE TABLE Branch2005040 (
   BName varchar2(20),
   City varchar2(20)
);

CREATE TABLE Customer2005040 (
   CName varchar2(20),
   City varchar2(20)
);

CREATE TABLE Borrow2005040 (
   LoanNo varchar2(5),
   CName varchar2(20),
   BName varchar2(20),
   Amount number(8,2)
);
```

DESC Deposit20051136;

```
SQL> desc deposit20051136
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 ACTNO                                              VARCHAR2(5)
 CNAME                                              VARCHAR2(20)
 BNAME                                              VARCHAR2(20)
 AMOUNT                                             NUMBER(8,2)
 ADATE                                              DATE
```

DESC Branch20051136;

```
SQL> desc branch20051136
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 BNAME                                              VARCHAR2(20)
 CITY                                               VARCHAR2(20)
```

DESC Customer2005040;

```
SQL> desc customer20051136
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 CNAME                                              VARCHAR2(20)
 CITY                                               VARCHAR2(20)
```

DESC Borrow2005040;

```
SQL> desc borrow20051136
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 LOANNO                                             VARCHAR2(5)
 CNAME                                              VARCHAR2(20)
 BNAME                                              VARCHAR2(20)
 AMOUNT                                             NUMBER(8,2)
```

INSERT INTO Deposit2005040 (ActNo, CName, BName, Amount, Adate)
VALUES ('102', 'Rahul', 'KAROLBAGH', '3500.00', '17-NOV-95');

```
SQL> select * from deposit20051136;

ACTNO CNAME                BNAME                AMOUNT ADATE
----- -------------------- -------------------- ---------- ---------
100   ANIL                 VRCE                   1000 01-MAR-95
101   SUNIL                AJNI                   5000 04-JAN-96
102   RAHUL                KAROLBAGH              3500 17-NOV-95
103   MADHURI              CHANDNI                1200 17-DEC-95
105   SANDIP               KAROLBAGH              2000 31-MAR-96
104   Pramod               MGROAD                 3000 27-MAR-96
```

INSERT INTO Branch2005040 (BName, City)
VALUES ('MGROAD', 'BANGALORE');

```
SQL> select * from branch20051136;

BNAME                CITY
-------------------- --------------------
MGRoad               Bangalore
VRCE                 NAGPUR
AJNI                 NAGPUR
KAROLBAGH            DELHI
CHANDNI              DELHI
```

INSERT INTO Customer2005040 (CName, City)
VALUES ('PRAMOD', 'NAGPUR');

```
CNAME                CITY
-------------------- --------------------
Pramod               Nagpur
ANIL                 CALCUTTA
SUNIL                DELHI
RAHUL                BARODA
MADHURI              NAGPUR
```

INSERT INTO Borrow2005040 (LoanNo, CName, BName, Amount)
VALUES (375, 'PRAMOD', 'VIHAR', 8000.00);

```
SQL> select * from borrow20051136;

LOANN CNAME                BNAME                    AMOUNT
----- -------------------- -------------------- ----------
375   Pramod               Vihar                      8000
201   ANIL                 VRCE                       1000
206   RAHUL                AJNI                       5000
311   SUNIL                DHARAMPEETH                3000
321   MADHURI              ANDHERI                    2000
```

LAB-2

ID	FNAME	LNAME	AGE	GENDER	LOC
1	Raj	Kumar	23	M	IND
2	Ajay	Panda	26	M	AUS
3	Sivam	Prasad	22	M	ENG
4	Pinky	Singh	26	F	AUS
5	Rahul	Kumar	24	M	BAN
6	Aditya	Das	29	M	IND
7	Avik	Das	28	M	IND
8	Shital	Jena	23	F	ENG
9	Soham	Tiwari	26	M	NZ

1. Create a table Customer with following attributes:
   Customer ID, First name, Last name, age of customer, gender of customer and present address of customer.
2. Display the structure of the created customer table.
3. Insert the following values in the table.
4. Retrieve and display the customer table with all values of attributes.
5. Retrieve and display all customer names.
6. Display the gender of all customers.
7. Fetch the unique addresses from customer table.
8. Display the current age and the age of customers after 2 years.
9. Combine the first and last name of customers and display it.
10. Retrieve the IDs of customer who lives in IND.
11. Display the customer details whose age is more than 25 years.
12. Display the IDs of customer who don't live in ENG.
13. Display the customer IDs and gender who either lives in AUS or age is 26.
14. Fetch all customer details whose name end with 'Das'.
15. List all customer IDs whose name starts with 'S'.
16. List out the customer age whose first name has 'i' as the 3rd letter.
17. Retrieve the customer details whose age is between 24 years to 28 years.
18. List out the customer address whose name has a 'n' alphabet in it.

Q1.

```
SQL> create table cust20051136(
  2  CustID number(10),
  3  Fname varchar2(20),
  4  Lname varchar2(20),
  5  Age number(3),
  6  Gender char(1),
  7  LOC varchar2(10)
  8  );

Table created.
```

Q2.

```
SQL> desc cust20051136;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 CUSTID                                             NUMBER(10)
 FNAME                                              VARCHAR2(20)
 LNAME                                              VARCHAR2(20)
 AGE                                                NUMBER(3)
 GENDER                                             CHAR(1)
 LOC                                                VARCHAR2(10)
```

Q3.

```
SQL> insert into cust20051136 values (1, 'Raj', 'Kumar', 23, 'M', 'IND');

1 row created.

SQL> insert into cust20051136 values (2, 'Ajay', 'Panda', 26, 'M', 'AUS');

1 row created.

SQL> insert into cust20051136 values (3, 'Sivam', 'Prasad', 22, 'M', 'ENG');

1 row created.

SQL> insert into cust20051136 values (4, 'Pinky', 'Singh', 26, 'F', 'AUS');

1 row created.

SQL> insert into cust20051136 values (5, 'Rahul', 'Kumar', 24, 'M', 'BAN');

1 row created.

SQL>
SQL> insert into cust20051136 values (6, 'Aditya', 'Das', 29, 'M', 'IND');

1 row created.

SQL> insert into cust20051136 values (7, 'Avik', 'Das', 28, 'M', 'IND');

1 row created.

SQL> insert into cust20051136 values (8, 'Shital', 'Jena', 23, 'F', 'ENG');

1 row created.

SQL> insert into cust20051136 values (9, 'Soham', 'Tiwari', 26, 'M', 'NZ');

1 row created.
```

Q4.

```
SQL> select * from cust20051136;

    CUSTID FNAME                LNAME                     AGE G LOC
---------- -------------------- -------------------- ---------- - ----------
         1 Raj                  Kumar                        23 M IND
         2 Ajay                 Panda                        26 M AUS
         3 Sivam                Prasad                       22 M ENG
         4 Pinky                Singh                        26 F AUS
         5 Rahul                Kumar                        24 M BAN
         6 Aditya               Das                          29 M IND
         7 Avik                 Das                          28 M IND
         8 Shital               Jena                         23 F ENG
         9 Soham                Tiwari                       26 M NZ

9 rows selected.
```

Q5.

```
SQL> select FNAME, LNAME from cust20051136;

FNAME                LNAME
-------------------- --------------------
Raj                  Kumar
Ajay                 Panda
Sivam                Prasad
Pinky                Singh
Rahul                Kumar
Aditya               Das
Avik                 Das
Shital               Jena
Soham                Tiwari

9 rows selected.
```

Q6.

```
SQL> select FNAME, LNAME, GENDER from cust20051136;

FNAME                LNAME                G
-------------------- -------------------- -
Raj                  Kumar                M
Ajay                 Panda                M
Sivam                Prasad               M
Pinky                Singh                F
Rahul                Kumar                M
Aditya               Das                  M
Avik                 Das                  M
Shital               Jena                 F
Soham                Tiwari               M

9 rows selected.
```

Q7.

```
SQL> select distinct LOC from cust20051136;

LOC
----------
AUS
NZ
ENG
IND
BAN
```

Q8.

```
SQL> select AGE, AGE+2 "NewAge" from cust20051136;

       AGE     NewAge
---------- ----------
        23         25
        26         28
        22         24
        26         28
        24         26
        29         31
        28         30
        23         25
        26         28

9 rows selected.
```

Q9.

```
SQL> select FNAME ||'  '||LNAME from cust20051136;

FNAME||''||LNAME
----------------------------------------
Raj  Kumar
Ajay  Panda
Sivam  Prasad
Pinky  Singh
Rahul  Kumar
Aditya  Das
Avik  Das
Shital  Jena
Soham  Tiwari

9 rows selected.
```

Q10.

```
SQL> select custID from cust20051136 where LOC='IND';

    CUSTID
----------
         1
         6
         7
```

Q11.

```
SQL> select * from cust20051136 where AGE>25;

    CUSTID FNAME               LNAME                     AGE G LOC
---------- ------------------- ------------------- ---------- - ----------
         2 Ajay                Panda                       26 M AUS
         4 Pinky               Singh                       26 F AUS
         6 Aditya              Das                         29 M IND
         7 Avik                Das                         28 M IND
         9 Soham               Tiwari                      26 M NZ
```

Q12.

```
SQL> select custID from cust20051136 where LOC!='ENG';

    CUSTID
----------
         1
         2
         4
         5
         6
         7
         9

7 rows selected.
```

Q13.

```
SQL> select custID,GENDER from cust20051136 where LOC='AUS' OR AGE=26;

    CUSTID G
---------- -
         2 M
         4 F
         9 M
```

Q14

```
SQL> select * from cust20051136 where Lname='Das';

    CUSTID FNAME                LNAME                     AGE G LOC
---------- -------------------- -------------------- ---------- - ----------
         6 Aditya               Das                        29 M IND
         7 Avik                 Das                        28 M IND
```

Q15.

```
SQL> select custID from cust20051136 where Fname like 'S%';

    CUSTID
----------
         3
         8
         9
```

Q16.

```
SQL> select AGE from cust20051136 where Fname like '__i%';

       AGE
----------
        29
        28
        23
```

Q17.

```
SQL> select * from cust20051136 where AGE between 24 and 28;

    CUSTID FNAME               LNAME                     AGE G LOC
---------- ------------------- ------------------- ---------- - ----------
         2 Ajay                Panda                       26 M AUS
         4 Pinky               Singh                       26 F AUS
         5 Rahul               Kumar                       24 M BAN
         7 Avik                Das                         28 M IND
         9 Soham               Tiwari                      26 M NZ
```

Q18.

```
SQL> select LOC  from cust20051136 where Fname like '%n%';

LOC
----------
AUS
```

LAB-3

ASSIGNMENT-2

1. Retrieve the details from the table DEPOSIT(roll number)
2. Calculate TA(10% of amount),DA(20% of amount) and TOTAL of each customer from BORROW(roll number) table also project CNAME & AMOUNT.
3. Retrieve the customer name, account no of DEPOSIT(roll number).
4. Retrieve the name of the customer living in NAGPUR.
5. Retrieve the name of the customers who opened account after 17-NOV-95.
6. Retrieve the account number and amount of the customer having account opened between 01-12-95 and 01-06.96.
7. Retrieve all the records from the table DEPOSIT(roll number) where CNAME begins with C..
8. Retrieve all the records from the table BORROW(roll number) where 2nd character of CNAME is U.
9. Retrieve all the records from the table DEPOSIT(roll number) where branch name is CHANDNI or MGROAD.
10. Retrieve all the records from the table DEPOSIT(roll number) where branch name is not in CHANDNI or MGROAD.
11. Retrieve all the records from the table BORROW(roll number) where amount in between 2000 and 3000.
12. Retrieve all the records from DEPOSIT(roll number). where amount > 1000 and arrange the customer name in ascending order.
13. Retrieve all the records from BOOROW(roll number) where amount>1000 and arrange customer name in ascending and branch name in descending order.
14. Find out the tables which are created by the user.
15. Retrieve customer details from BORROW(roll number) table where the third character of the customer name is either ‘A’ or ‘D’.
16. Retrieve all the records from the table BORROW(roll number) where amount is not between 2000 and 8000.
17. Find out the unique records from the table DEPOSIT(roll number).

```
SQL> select * from deposit20051136;

ACTNO CNAME                BNAME                     AMOUNT ADATE
----- -------------------- -------------------- ---------- ---------
100   ANIL                 VRCE                       1000 01-MAR-95
101   SUNIL                AJNI                       5000 04-JAN-96
102   RAHUL                KAROLBAGH                  3500 17-NOV-95
103   MADHURI              CHANDNI                    1200 17-DEC-95
105   SANDIP               KAROLBAGH                  2000 31-MAR-96
104   Pramod               MGROAD                     3000 27-MAR-96

6 rows selected.
```

```
SQL> select cname, amount, 0.1*amount "TA", 0.2*amount "DA", amount+0.1*amount+0.2*amount "Total" from borrow20051136;

CNAME                AMOUNT         TA         DA      Total
-------------------- ---------- ---------- ---------- ----------
Pramod                 8000        800       1600      10400
ANIL                   1000        100        200       1300
RAHUL                  5000        500       1000       6500
SUNIL                  3000        300        600       3900
MADHURI                2000        200        400       2600
```

```
SQL> select actno, cname from deposit20051136;

ACTNO CNAME
----- --------------------
100   ANIL
101   SUNIL
102   RAHUL
103   MADHURI
105   SANDIP
104   Pramod

6 rows selected.
```

```
SQL> select cname from customer20051136 where CITY='NAGPUR' OR CITY='Nagpur';

CNAME
--------------------
Pramod
MADHURI
```

```
SQL> select cname from deposit20051136 where ADATE>'17-NOV-95';

CNAME
--------------------
SUNIL
MADHURI
SANDIP
Pramod
```

```
SQL> select actno, amount from deposit20051136 where ADATE between '01-DEC-95' and '01-JUN-96';

ACTNO     AMOUNT
----- ----------
101         5000
103         1200
105         2000
104         3000
```

```
SQL> select * from deposit20051136 where CNAME like 'C%';

no rows selected
```

```
SQL> select * from borrow20051136 where CNAME like '_U%';

LOANN CNAME                BNAME                     AMOUNT
----- -------------------- -------------------- ----------
311   SUNIL                DHARAMPEETH                3000
```

```
SQL> select * from deposit20051136 where BNAME!='CHANDNI' OR BNAME!='MGROAD';

ACTNO CNAME                BNAME                     AMOUNT ADATE
----- -------------------- -------------------- ---------- ---------
100   ANIL                 VRCE                       1000 01-MAR-95
101   SUNIL                AJNI                       5000 04-JAN-96
102   RAHUL                KAROLBAGH                  3500 17-NOV-95
103   MADHURI              CHANDNI                    1200 17-DEC-95
105   SANDIP               KAROLBAGH                  2000 31-MAR-96
104   Pramod               MGROAD                     3000 27-MAR-96
```

```
SQL> select * from deposit20051136 where BNAME='CHANDNI' OR BNAME='MGROAD';

ACTNO CNAME                BNAME                     AMOUNT ADATE
----- -------------------- -------------------- ---------- ---------
103   MADHURI              CHANDNI                    1200 17-DEC-95
104   Pramod               MGROAD                     3000 27-MAR-96
```

```
SQL> select * from borrow20051136 where amount between 2000 and 3000;

LOANN CNAME                BNAME                    AMOUNT
----- -------------------- -------------------- ----------
311   SUNIL                DHARAMPEETH                3000
321   MADHURI              ANDHERI                    2000
```

```
SQL> select * from deposit20051136 where amount>1000 order by CNAME;

ACTNO CNAME                BNAME                    AMOUNT ADATE
----- -------------------- -------------------- ---------- ---------
103   MADHURI              CHANDNI                    1200 17-DEC-95
104   Pramod               MGROAD                     3000 27-MAR-96
102   RAHUL                KAROLBAGH                  3500 17-NOV-95
105   SANDIP               KAROLBAGH                  2000 31-MAR-96
101   SUNIL                AJNI                       5000 04-JAN-96
```

```
SQL> select * from borrow20051136 where amount>1000 order by CNAME, BNAME desc;

LOANN CNAME                BNAME                    AMOUNT
----- -------------------- -------------------- ----------
321   MADHURI              ANDHERI                    2000
375   Pramod               Vihar                      8000
206   RAHUL                AJNI                       5000
311   SUNIL                DHARAMPEETH                3000
```

```
SQL> select * from borrow20051136 where CNAME like '__A%' or CNAME like '__D%';

LOANN CNAME                BNAME                    AMOUNT
----- -------------------- -------------------- ----------
321   MADHURI              ANDHERI                    2000
```

```
SQL> select * from borrow20051136 where amount<2000 or amount>8000;

LOANN CNAME                BNAME                    AMOUNT
----- -------------------- -------------------- ----------
201   ANIL                 VRCE                       1000
```

```
SQL> select * from deposit20051136;

ACTNO CNAME                BNAME                    AMOUNT ADATE
----- -------------------- -------------------- ---------- ---------
100   ANIL                 VRCE                       1000 01-MAR-95
101   SUNIL                AJNI                       5000 04-JAN-96
102   RAHUL                KAROLBAGH                  3500 17-NOV-95
103   MADHURI              CHANDNI                    1200 17-DEC-95
105   SANDIP               KAROLBAGH                  2000 31-MAR-96
104   Pramod               MGROAD                     3000 27-MAR-96
```

```
SQL> select distinct amount from deposit20051136;

    AMOUNT
----------
      1000
      5000
      1200
      3500
      2000
      3000
```

LAB-4

```
SQL> update deposit20051136
  2  set amount=amount*0.1
  3  where bname='VRCE';

1 row updated.

SQL> select * from deposit20051136;

ACTNO CNAME                BNAME                     AMOUNT ADATE
----- -------------------- -------------------- ---------- ---------
100   ANIL                 VRCE                        100 01-MAR-95
101   SUNIL                AJNI                       5000 04-JAN-96
102   RAHUL                KAROLBAGH                  3500 17-NOV-95
103   MADHURI              CHANDNI                    1200 17-DEC-95
105   SANDIP               KAROLBAGH                  2000 31-MAR-96
104   Pramod               MGROAD                     3000 27-MAR-96
```

```
SQL> update deposit20051136
  2  set amount=amount+amount*0.1
  3  where bname='VRCE' AND cname='ANIL';

1 row updated.

SQL> select * from deposit20051136;

ACTNO CNAME                BNAME                     AMOUNT ADATE
----- -------------------- -------------------- ---------- ---------
100   ANIL                 VRCE                       1210 01-MAR-95
101   SUNIL                AJNI                       5000 04-JAN-96
102   RAHUL                KAROLBAGH                  3500 17-NOV-95
103   MADHURI              CHANDNI                    1200 17-DEC-95
105   SANDIP               KAROLBAGH                  2000 31-MAR-96
104   Pramod               MGROAD                     3000 27-MAR-96
```

```
SQL> create table STUDENT (
  2  name varchar(20),
  3  rollno number(10),
  4  branch varchar2(20),
  5  city varchar2(20));

Table created.

SQL> desc student;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 NAME                                               VARCHAR2(20)
 ROLLNO                                             NUMBER(10)
 BRANCH                                             VARCHAR2(20)
 CITY                                               VARCHAR2(20)
```

```
SQL> insert into student values('Vijaya', 150, 'CSE', 'Chennai');

1 row created.

SQL> insert into student values('Sita', 202, 'ETC', 'Kolkata');

1 row created.

SQL> insert into student values('Ravi', 300, 'EEE', 'Delhi');

1 row created.

SQL> insert into student values('Basu', 165, 'ETC', 'Chennai');

1 row created.

SQL> insert into student values('Rasmi', 107, 'ETC', 'RKL');

1 row created.

SQL> insert into student values('Karan', 111, 'CSE', 'CTC');

1 row created.

SQL> insert into student values('Rekha', 117, 'BME', 'BBSR');

1 row created.
```

```
SQL> select * from student;

NAME                    ROLLNO BRANCH              CITY
-------------------- ---------- -------------------- --------------------
Vijaya                     150 CSE                  Chennai
Sita                       202 ETC                  Kolkata
Ravi                       300 EEE                  Delhi
Basu                       165 ETC                  Chennai
Rasmi                      107 ETC                  RKL
Karan                      111 CSE                  CTC
Rekha                      117 BME                  BBSR

7 rows selected
```

```
SQL> select count(branch) from student;

COUNT(BRANCH)
-------------
            7

SQL> select count(branch) from student where branch='CSE';

COUNT(BRANCH)
-------------
            2

SQL> select count(branch) from student where branch='ETC';

COUNT(BRANCH)
-------------
            3

SQL> select count(branch) from student where branch='EEE';

COUNT(BRANCH)
-------------
            1

SQL> select count(branch) from student where branch='BME';
```

```
SQL> select count(branch) from student where branch='BME';

COUNT(BRANCH)
-------------
           1

SQL> select count(branch) from student where branch like 'E%';

COUNT(BRANCH)
-------------
           4

SQL> delete from student where branch='ETC';

3 rows deleted.
```

```
SQL> select * from student;

NAME                    ROLLNO BRANCH              CITY
-------------------- ---------- ------------------- --------------------
Vijaya                      150 CSE                 Chennai
Ravi                        300 EEE                 Delhi
Karan                       111 CSE                 CTC
Rekha                       117 BME                 BBSR
```

```
SQL> rename student to studentinformation;

Table renamed.

SQL> alter table studentinformation add marks number(8);

Table altered.
```

```
SQL> desc studentinformation;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 NAME                                               VARCHAR2(20)
 ROLLNO                                             NUMBER(10)
 BRANCH                                             VARCHAR2(20)
 CITY                                               VARCHAR2(20)
 MARKS                                              NUMBER(8)
```

```
SQL> alter table studentinformation modify name varchar2(25);

Table altered.

SQL> alter table studentinformation drop column marks;

Table altered.

SQL> desc studentinformation;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 NAME                                               VARCHAR2(25)
 ROLLNO                                             NUMBER(10)
 BRANCH                                             VARCHAR2(20)
 CITY                                               VARCHAR2(20)

SQL> delete from studentinformation;

4 rows deleted.
```

```
SQL> desc studentinformation;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 NAME                                               VARCHAR2(25)
 ROLLNO                                             NUMBER(10)
 BRANCH                                             VARCHAR2(20)
 CITY                                               VARCHAR2(20)

SQL> drop table studentinformation;

Table dropped.
```

```
SQL> select sum(amount) from deposit20051136;

SUM(AMOUNT)
-----------
      15910

SQL> select sum(amount) from deposit20051136 where adate>'04-JAN-96';

SUM(AMOUNT)
-----------
       5000

SQL> select count(bname) from deposit20051136;

COUNT(BNAME)
------------
           6
```

```
SQL> select max(amount) from deposit20051136 where bname='VRCE';

MAX(AMOUNT)
-----------
       1210
```

LAB-5

SQL> select sysdate from dual;

SYSDATE

17-FEB-22

SQL> select * from dual;

D
-
X

SQL> select 4*5 from dual;

     4*5

      20

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

LAST_DAY(
---------
28-FEB-22

SQL> select months_between(sysdate, '17-feb-22') from dual;

MONTHS_BETWEEN(SYSDATE,'17-FEB-22')
-----------------------------------
                                  0

SQL> select months_between(sysdate, '17-feb-23') from dual;

MONTHS_BETWEEN(SYSDATE,'17-FEB-23')
-----------------------------------
                                -12

SQL> select months_between(sysdate, '17-feb-21') from dual;

MONTHS_BETWEEN(SYSDATE,'17-FEB-21')
-----------------------------------
                                 12

SQL> clear
SQL> clear;
SQL> select 10 * 10 from dual;

    10*10
----------
       100

SQL> select sysdate from dual;

SYSDATE
---------
17-FEB-22

SQL> select abs(-20) from dual;

  ABS(-20)
----------
        20

SQL> select power(10,10) from dual;

POWER(10,10)
```

```
------------
 1.0000E+10

SQL> select sqrt(25) from dual;

 SQRT(25)
----------
         5

SQL> select round(23.565, 1) from dual;

ROUND(23.565,1)
---------------
           23.6

SQL> select lower('TRIDENT') from dual;

LOWER('
-------
trident

SQL> select upper('trident') from dual;

UPPER('
-------
TRIDENT

SQL> select substr('Oracle', 0, 3) from dual;

SUB
---
Ora

SQL> select extract(month from sysdate) from dual;

EXTRACT(MONTHFROMSYSDATE)
-------------------------
                        2

SQL> select months_between('01-jan-07', '01-may-07') from dual;

MONTHS_BETWEEN('01-JAN-07','01-MAY-07')
---------------------------------------
                                     -4

SQL> select abs(months_between('01-jan-07', '01-may-07')) from dual;

ABS(MONTHS_BETWEEN('01-JAN-07','01-MAY-07'))
```

```
-------------------------------------------
                                4

SQL> select round(56.23, -1) from dual;

ROUND(56.23,-1)
---------------
          60

SQL> select round(56.23, -2) from dual;

ROUND(56.23,-2)
---------------
         100

SQL> select round(56.23, -3) from dual;

ROUND(56.23,-3)
---------------
           0

SQL> select mod(1600, 300) AS remainder from dual;

 REMAINDER
----------
      100



SQL> select * from customer20051136;

CNAME              CITY
-------------------- --------------------
Pramod             Nagpur
ANIL               CALCUTTA
SUNIL              DELHI
RAHUL              BARODA
MADHURI            NAGPUR

SQL> select * from cust20051136;

   CUSTID FNAME              LNAME                    AGE G LOC
---------- -------------------- -------------------- ---------- - ----------
         1 Raj                Kumar                  23 M IND
         2 Ajay               Panda                  26 M AUS
         3 Sivam              Prasad                 22 M ENG
         4 Pinky              Singh                  26 F AUS
         5 Rahul              Kumar                  24 M BAN
```

```
6 Aditya          Das                  29 M IND
7 Avik            Das                  28 M IND
8 Shital          Jena                 23 F ENG
9 Soham           Tiwari               26 M NZ
```

9 rows selected.

```
SQL> select max(age) from cust20051136;

  MAX(AGE)
----------
        29

SQL> select min(age) from cust20051136;

  MIN(AGE)
----------
        22
```

LAB-6

```
SQL> create table faculty(
  2  ID number(2), fname varchar(20) constraint a1 not null,
  3  lname varchar(20), age number(2) constraint s2 check (age>20 and age<60),
  4  address varchar(3) constraint a3 not null, dept varchar(10));

Table created.

SQL> drop table faculty;

Table dropped.

SQL> create table faculty(
```

```
  2  ID varchar(3), fname varchar(20) constraint a1 not null,
  3  lname varchar(20), age number(2) constraint s2 check (age>20 and age<60),
  4  address varchar(3) constraint a3 not null, dept varchar(10));

Table created.

SQL> desc faculty;
 Name                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 ID                                VARCHAR2(3)
 FNAME                     NOT NULL VARCHAR2(20)
 LNAME                             VARCHAR2(20)
 AGE                               NUMBER(2)
 ADDRESS                   NOT NULL VARCHAR2(3)
 DEPT                              VARCHAR2(10)

SQL> drop table faculty;

Table dropped.

SQL> create table faculty(
  2  ID varchar(3), fname varchar(20) constraint a1 not null,
  3  lname varchar(20), age number(2) constraint s2 check (age>20 and age<60),
  4  address varchar(3) constraint a3 not null, dept varchar(10), constraint a4 primary key(ID));

Table created.
```

```
SQL> desc faculty;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 ID                                        NOT NULL VARCHAR2(3)
 FNAME                                     NOT NULL VARCHAR2(20)
 LNAME                                              VARCHAR2(20)
 AGE                                                NUMBER(2)
 ADDRESS                                   NOT NULL VARCHAR2(3)
 DEPT                                               VARCHAR2(10)

SQL> insert into faculty values ('A01', 'Nick', 'Jones', 34,'AUS', 'CSE');

1 row created.

SQL> insert into faculty values ('A02', 'Albert', 'Cruz', 43,'NZ', 'ELEC');

1 row created.

SQL> insert into faculty(ID, fname, lname, age, address) values ('A03', 'Priti', 'Roy', 46,'IND');

1 row created.

SQL> insert into faculty values ('A04', 'Rakesh', 'Ranjan', 54,'IND','IT');

1 row created.

SQL> insert into faculty values ('A05', 'Jyoti', 'Das', 28,'IND','MECH');
```

1 row created.

SQL> insert into faculty values ('B01', 'Maria', 'Jones', 25,'ENG','CIVIL');

1 row created.

SQL> insert into faculty values ('B02', 'Alen', 'Wright', 42,'NZ','CSE');

1 row created.

SQL> insert into faculty values ('B03', 'Blake', 'Taylor', 39,'AUS','ELEC');

1 row created.

SQL> insert into faculty values ('B04', 'Scott', 'Orton', 48,'USA','LAW');

1 row created.

SQL> insert into faculty values ('B05', 'Kris', 'Gopal', 59,'IND','IT');

1 row created.

SQL> insert into faculty values ('C01', 'Aryan', 'Mohanty', 23,'IND','CIVIL');

1 row created.

```
SQL> insert into faculty(ID, fname, age, address, dept) values ('C02', 'Samuel', 31,'SL','LAW');

1 row created.

SQL> insert into faculty values ('C03', 'Abir', 'Abrahim', 36,'IND','MECH');

1 row created.

SQL> select * from faculty;

ID  FNAME           LNAME                AGE ADD DEPT
--- --------------- --------------- ---------- --- ----------
A01 Nick            Jones                34 AUS CSE
A02 Albert          Cruz                 43 NZ  ELEC
A03 Priti           Roy                  46 IND
A04 Rakesh          Ranjan               54 IND IT
A05 Jyoti           Das                  28 IND MECH
B01 Maria           Jones                25 ENG CIVIL
B02 Alen            Wright               42 NZ  CSE
B03 Blake           Taylor               39 AUS ELEC
B04 Scott           Orton                48 USA LAW
B05 Kris            Gopal                59 IND IT
C01 Aryan           Mohanty              23 IND CIVIL

ID  FNAME           LNAME                AGE ADD DEPT
--- --------------- --------------- ---------- --- ----------
```

C02 Samuel 31 SL LAW

C03 Abir Abrahim 36 IND MECH

13 rows selected.

SQL> select * from faculty where address='AUS';

ID FNAME LNAME AGE ADD DEPT

--- ---------- ---------- ---------- --- ----------

A01 Nick Jones 34 AUS CSE

B03 Blake Taylor 39 AUS ELEC

SQL> select ID from faculty where dept='CSE';

ID

A01

B02

SQL> select fname from faculty where age>40;

FNAME

Albert

Priti

Rakesh

Alen

Scott

Kris

6 rows selected.

SQL> select * from faculty where fname like '%i%';

ID FNAME LNAME AGE ADD DEPT

--- ---------- ---------- ---------- --- ----------

A01 Nick Jones 34 AUS CSE

A03 Priti Roy 46 IND

A05 Jyoti Das 28 IND MECH

B01 Maria Jones 25 ENG CIVIL

B05 Kris Gopal 59 IND IT

C03 Abir Abrahim 36 IND MECH

6 rows selected.

SQL> alter table faculty add(salary number(8) default 20000);

Table altered.

SQL> select fname from faculty order by age desc;

FNAME

Kris

Rakesh

Scott

Priti

Albert

Alen

Blake

Abir

Nick

Samuel

Jyoti

FNAME

Maria

Aryan

13 rows selected.

SQL> select dept from faculty where lname=NULL;

no rows selected

SQL> select dept from faculty where lname='NULL';

no rows selected

```
SQL> select dept from faculty where lname='';

no rows selected

SQL> select dept from faculty where lname is null;

DEPT
----------
LAW

SQL> select ID from faculty where lname like '%n';

ID
---
A04
B04

SQL> select count(ID) from faculty where address='IND';

 COUNT(ID)
----------
         6

SQL> update faculty set salary=40000 where age>40;

6 rows updated.
```

```
SQL> select * from faculty;

ID  FNAME               LNAME                    AGE ADD DEPT
--- -------------------- -------------------- ---------- --- ----------
   SALARY
----------
A01 Nick                Jones                    34 AUS CSE
    20000

A02 Albert              Cruz                     43 NZ  ELEC
    40000

A03 Priti               Roy                      46 IND
    40000


ID  FNAME               LNAME                    AGE ADD DEPT
--- -------------------- -------------------- ---------- --- ----------
   SALARY
----------
A04 Rakesh              Ranjan                   54 IND IT
    40000

A05 Jyoti               Das                      28 IND MECH
    20000

B01 Maria               Jones                    25 ENG CIVIL
```

20000

ID FNAME LNAME AGE ADD DEPT

--- ---------- ---------- ---------- --- ----------

SALARY

B02 Alen Wright 42 NZ CSE

40000

B03 Blake Taylor 39 AUS ELEC

20000

B04 Scott Orton 48 USA LAW

40000

ID FNAME LNAME AGE ADD DEPT

--- ---------- ---------- ---------- --- ----------

SALARY

B05 Kris Gopal 59 IND IT

40000

C01 Aryan Mohanty 23 IND CIVIL

20000

C02 Samuel 31 SL LAW

20000

ID FNAME LNAME AGE ADD DEPT

--- -------------------- -------------------- ---------- --- ----------

SALARY

C03 Abir Abrahim 36 IND MECH

20000

13 rows selected.

SQL> select * from faculty;

ID FNAME LNAME AGE ADD DEPT

--- -------------------- -------------------- ---------- --- ----------

SALARY

A01 Nick Jones 34 AUS CSE

20000

A02 Albert Cruz 43 NZ ELEC

40000

A03 Priti Roy 46 IND

40000

ID FNAME LNAME AGE ADD DEPT

--- -------------------- -------------------- ---------- --- ----------

SALARY

A04 Rakesh Ranjan 54 IND IT

40000

A05 Jyoti Das 28 IND MECH

20000

B01 Maria Jones 25 ENG CIVIL

20000

ID FNAME LNAME AGE ADD DEPT

--- -------------------- -------------------- ---------- --- ----------

SALARY

B02 Alen Wright 42 NZ CSE

40000

B03 Blake Taylor 39 AUS ELEC

20000

B04 Scott Orton 48 USA LAW

40000

ID FNAME LNAME AGE ADD DEPT

--- ---------- ---------- ---------- --- ----------

SALARY

B05 Kris Gopal 59 IND IT

40000

C01 Aryan Mohanty 23 IND CIVIL

20000

C02 Samuel 31 SL LAW

20000

ID FNAME LNAME AGE ADD DEPT

--- ---------- ---------- ---------- --- ----------

SALARY

C03 Abir Abrahim 36 IND MECH

20000

13 rows selected.

```
SQL> set page width 500;
SP2-0158: unknown SET option "page"
SQL> set page-width 500;
SP2-0158: unknown SET option "page-width"
SQL> set page 500;
SP2-0158: unknown SET option "page"
SQL> set pagesize 500;
SQL> select * from faculty;

ID  FNAME               LNAME                    AGE ADD DEPT
--- -------------------- -------------------- ---------- --- ----------
   SALARY
----------
A01 Nick                Jones                     34 AUS CSE
    20000

A02 Albert              Cruz                      43 NZ  ELEC
    40000

A03 Priti               Roy                       46 IND
    40000

A04 Rakesh              Ranjan                    54 IND IT
    40000

A05 Jyoti               Das                       28 IND MECH
```

20000

B01 Maria Jones 25 ENG CIVIL

20000

B02 Alen Wright 42 NZ CSE

40000

B03 Blake Taylor 39 AUS ELEC

20000

B04 Scott Orton 48 USA LAW

40000

B05 Kris Gopal 59 IND IT

40000

C01 Aryan Mohanty 23 IND CIVIL

20000

C02 Samuel 31 SL LAW

20000

C03 Abir Abrahim 36 IND MECH

20000

13 rows selected.

SQL> set rowsize 500;

SP2-0158: unknown SET option "rowsize"

SQL> select * from faculty where dept='MECH';

ID FNAME LNAME AGE ADD DEPT

--- -------------------- -------------------- ---------- --- ----------

SALARY

A05 Jyoti Das 28 IND MECH

20000

C03 Abir Abrahim 36 IND MECH

20000

SQL> update faculty set dept='LAW' where ID='A03';

1 row updated.

SQL> select unique(id) from faculty;

ID

A01

A02

A03

A04

A05

B01

B02

B03

B04

B05

C01

C02

C03

13 rows selected.

SQL> select unique(dept) from faculty;

DEPT

LAW

IT

ELEC

CIVIL

CSE

MECH

6 rows selected.

```
SQL> select ID from faculty where address='US' or address='NZ';

ID
---
A02
B02

SQL> select ID from faculty where address='AUS' or address='NZ';

ID
---
A01
A02
B02
B03

SQL> update faculty set salary=60000 where dept!='LAW';

10 rows updated.

SQL> select max(age), min(age) from faculty;

 MAX(AGE)   MIN(AGE)
---------- ----------
       59         23

SQL> insert into faculty values ('D01','Aviroop', 'Paul', 22, 'IND', 'CSE', 50000);
```

1 row created.

SQL> select ascii(fname) from faculty where age=28;

ASCII(FNAME)

74

SQL> select fname||' '||lname from faculty where ID='B03';

FNAME||''||LNAME

Blake Taylor

SQL> select ID, avg(age) from faculty group by ID;

ID AVG(AGE)

--- ---

A03 46

B03 39

B05 59

A04 54

C02 31

D01 22

A02 43

B02 42

C01 23

A05 28

B01 25

B04 48

C03 36

A01 34

14 rows selected.

SQL> select avg(age) from faculty where age>30 group by ID;

AVG(AGE)

46

39

59

54

31

43

42

48

36

34

10 rows selected.

SQL> select ID, avg(age) from faculty where age>30 group by ID;

ID AVG(AGE)

--- ----------

A03 46

B03 39

B05 59

A04 54

C02 31

A02 43

B02 42

B04 48

C03 36

A01 34

10 rows selected.

SQL>