Name: PRABHMEET Roll No: 102103785 Group:2COE27

LAB ASSIGNMENT – 1

1. Create table Student (Rno, Name, DOB, Gender, Class, College,City, Marks)

```
create table Student(
    RNo number(10),
    Name_ varchar(20),
    DOB date,
    Gender varchar(1),
    Class varchar(12),
    College varchar(30),
    City varchar(10),
    Marks int
);
```

2. Insert 5 records in student table

```
insert into Student values (102103274,'Priyal','23-Jul-2004','F',18,'Thapar','Gurugram',67);
insert into Student values (102103291,'Sukhmanjot','14-Nov-2002','F',20,'Thapar','Patiala',97);
insert into Student values (102103273,'Bhawna','30-Jan-2003','F',19,'Thapar','Noida',70);
insert into Student values (102103665,'Ashish','22-Sep-2003','M',19,'Thapar','Abohar',99);
insert into Student values (102103212,'Happy','13-Dec-2001','M',21,'PEC','Alighar',67);
```

3. Display the information of all the students

select * from Student;

RNO	NAME_	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
102103273	Bhawna	30-JAN-03	F	19	Thapar	Noida	70
102103212	Happy	13-DEC-01	M	21	PEC	Alighar	67
102103274	Priyal	23-JUL-04	F	18	Thapar	Gurugram	67
102103665	Ashish	22-SEP-03	M	19	Thapar	Abohar	99
102103291	Sukhmanjot	14-NOV-02	F	20	Thapar	Patiala	97

4. Display the detail structure of student table

desc Student;

Column	Null?	Type
RNO	-	NUMBER(10,0)
NAME_	-	VARCHAR2(20)
DOB	-	DATE
GENDER	-	VARCHAR2(1)
CLASS	-	VARCHAR2(12)
COLLEGE	-	VARCHAR2(30)
CITY	-	VARCHAR2(10)
MARKS	-	NUMBER

5. Display Rno, Name and Class information of 'Patiala' students.

select Rno, Name, Class from Student where City = 'Patiala';

RNO	NAME_	CLASS
102103291	Sukhmanjot	20

6. Display information on ascending order of marks

select * from Student order by Marks asc;

RNO	NAME_	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
102103274	Priyal	23-JUL-04	F	18	Thapar	Gurugram	67
102103212	Happy	13-DEC-01	M	21	PEC	Alighar	67
102103273	Bhawna	30-JAN-03	F	19	Thapar	Noida	70
102103291	Sukhmanjot	14-NOV-02	F	20	Thapar	Patiala	97
102103665	Ashish	22-SEP-03	M	19	Thapar	Abohar	99

7. Change the marks of Rno 5 to 89.

update Student set Marks = 89 where Rno = 102103212;

select * from Student;

RNO	NAME_	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
102103273	Bhawna	30-JAN-03	F	19	Thapar	Noida	70
102103212	Happy	13-DEC-01	M	21	PEC	Alighar	89
102103274	Priyal	23-JUL-04	F	18	Thapar	Gurugram	67
102103665	Ashish	22-SEP-03	M	19	Thapar	Abohar	99
102103291	Sukhmanjot	14-NOV-02	F	20	Thapar	Patiala	97

8. Change the name and city of Rno 9.

update Student set Name_ = 'Rhythm', City = 'Amritsar' where Rno = 102103212;

select * from Student;

RNO	NAME_	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
102103273	Bhawna	30-JAN-03	F	19	Thapar	Noida	70
102103212	Rhythm	13-DEC-01	M	21	PEC	Amritsar	67
102103291	Sukhmanjot	14-NOV-02	F	20	Thapar	Patiala	97
102103665	Ashish	22-SEP-03	M	19	Thapar	Abohar	99
102103274	Priyal	23-JUL-04	F	18	Thapar	Gurugram	67

9. Delete the information of 'Amritsar' city records

delete from Student where City = 'Amritsar';

select * from Student;

```
1 row(s) deleted.
```

RNO	NAME_	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
102103273	Bhawna	30-JAN-03	F	19	Thapar	Noida	70
102103291	Sukhmanjot	14-NOV-02	F	20	Thapar	Patiala	97
102103665	Ashish	22-SEP-03	M	19	Thapar	Abohar	99
102103274	Priyal	23-JUL-04	F	18	Thapar	Gurugram	67

10. Delete the records of student where marks<30.

delete from Student where Marks < 30;

select * from Student;

```
delete from students where marks <30


0 row(s) deleted.
```

LAB ASSIGNMENT – 2

```
create table Emp(
    EmpNo int,
    Ename varchar(20),
    Job varchar(40),
    Salary int,
    Commission varchar(30),
    DeptNO int
);

insert into emp values( 7839, 'Rohit', 'Manager', 1000,NULL, 10) ;
insert into emp values( 7840, 'Priya', 'President', 4000, NULL,20) ;
insert into emp values( 7823, 'Sbyam', 'Assistant', 5000,NULL, 30) ;
insert into emp values( 7339, 'Anita', 'Manager', 1000, NULL,10) ;
insert into emp values( 7271, 'Manish', 'Clerk', 4000,NULL, 40) ;
insert into emp values( 7548, 'Gitika', 'Analyst', 1200, NULL,50) ;
insert into emp values( 7182, 'Nandini', 'Salesman', 1500,NULL, 60) ;
insert into emp values( 7833, 'Karnika', 'Analyst', 1200, NULL,50) ;
insert into emp values( 7327, 'Sona', 'Manager', 2000,NULL, 10) ;
insert into emp values( 7289, 'Tia', 'Clerk', 1000,NULL, 20) ;
insert into emp values( 7282, 'Sia', 'Assistant', 3000,NULL, 30) ;
insert into emp values( 7317, 'Naman', 'Manager', 2000,NULL, 10) ;
insert into emp values( 7393, 'Garima', 'Clerk', 1000,NULL, 40) ;
insert into emp values( 7292, 'Keerthana', 'Analyst', 1000,NULL, 50) ;
insert into emp values( 7221, 'Harsh', 'Salesman', 2000,NULL, 60) ;
insert into emp values( 7383, 'Ram', 'Analyst', 2000, NULL,50) ;
select * from emp;
```

Q1) Get employee no and employee name who works in dept no 10?

Select Empno, Ename from Emp where DeptNO = 10;

EMPNO	ENAME
7839	Rohit
7339	Anita
7327	Sona
7317	Naman

Q2) Display the employee names of those clerks whose salary > 2000?

select * from Emp where Salary>2000;

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO
7840	Priya	President	4000	-	20
7823	Sbyam	Assistant	5000	-	30
7271	Manish	Clerk	4000	-	40
7282	Sia	Assistant	3000	-	30

Q3) Display name and job of Salesperson & Clerks?

select Ename, Salary from emp where Job in ('Salesman', 'Clerk');

ENAME	SALARY
Manish	4000
Nandini	1500
Tia	1000
Garima	1000
Harsh	2000

Q4) Display all details of employees whose salary between 2000 and 3000?

select * from emp where Salary >= 2000 and Salary <= 3000;

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO
7327	Sona	Manager	2000	-	10
7282	Sia	Assistant	3000	-	30
7317	Naman	Manager	2000	-	10
7221	Harsh	Salesman	2000	-	60
7383	Ram	Analyst	2000	-	50

Q5) Display all details of employees whose dept no is 10, 20, or 30?

select * from emp where DeptNO in (10,20,30);

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO
7839	Rohit	Manager	1000	-	10
7840	Priya	President	4000	-	20
7823	Sbyam	Assistant	5000	-	30
7339	Anita	Manager	1000	-	10
7327	Sona	Manager	2000	-	10
7289	Tia	Clerk	1000	-	20
7282	Sia	Assistant	3000	-	30
7317	Naman	Manager	2000	-	10

Q6) Display name of those employees whose commission is NULL?

select * from emp where commission is NULL;

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO
7839	Rohit	Manager	1000	-	10
7840	Priya	President	4000	-	20
7823	Sbyam	Assistant	5000	-	30
7339	Anita	Manager	1000	-	10
7271	Manish	Clerk	4000	-	40
7548	Gitika	Analyst	1200	-	50
7182	Nandini	Salesman	1500	-	60

Q7) Display dept no & salary in ascending order of dept no and within each dept no salary should be in descending order?

select DeptNO,Salary from emp order by DEPTNO asc, Salary asc;

DEPTNO	SALARY
10	1000
10	1000
10	2000
10	2000
20	1000
20	4000
30	3000
30	5000
40	1000
40	4000
50	1000
50	1200
50	1200
50	2000
60	1500
60	2000

Q8) Display name of employees having two 'a' or 'A' chars in the name?

select Ename from Emp where Ename like '%a%a%' or Ename like '%A%A%';

ENAME
Karnika
Naman
Garima
Keerthana

Q9) Display the name of the employees whose second char is 'b' or 'B'?

select Ename from Emp where Ename like '_b%' or Ename like '_B%';

ENAME
Sbyam
abhay

Q10) Display the name of the employees whose first or last char is 'a' or 'A'?

select Ename from Emp where Ename like 'a%a' or ename like 'a%A' or ename like 'A%a' or ename like 'A%A';

ENAME
Priya
Anita
Gitika
Karnika
Sona
Tia
Sia
Garima
Keerthana
abhay

Q11) Display maximum, minimum, average salary of deptno 10 employees.

select MIN(Salary),MAX(Salary),AVG(Salary) from Emp where DeptNO = 10;

MIN(SALARY)	MAX(SALARY)	AVG(SALARY)
1000	2000	1400

Q12) Display total number of employees working in deptno 20

select count(EmpNo) from Emp where DeptNO = 20;

COUNT(EMPNO)
2

Q13) Display total salary paid to clerks

select SUM(Salary) from Emp where DeptNO = 10;

SUM(SALARY)
7000

Q14) Display system date

select sysdate from dual;

SYSDATE
04-FEB-23

Q15) Display the result of (12*12)/13

select (12*12)/13 from dual;

(12*12)/13
11.0769230769230769230769230769230769230769230 8

Q16) Display info of 'raj' irrespective to the case in which the data is stored

select * from Emp where Ename = 'raj';

no data found

LAB ASSIGNMENT – 3

Q1) Use the following functions _

1. chr (n):

select chr(67) from dual;

CHR(67)
C

2. cancat(char1,char2):

```
select concat('Prabhmeet','kaur') from dual;
```

CONCAT('PRABHMEET','KAUR')
Prabhmeetkaur

3. instr(string,char):

```
select instr('Prabhmeet','meet') from dual;
```

INSTR('PRABHMEET','MEET')
6

4. length(n):

```
select length('Prabhmeet') from dual;
```

LENGTH('PRABHMEET')
9

5. lpad(char1 ,n [,char2]):

select lpad('A',5,'B') from dual;

LPAD('A',5,'B')
BBBBA

6. ltrim(string [,char(s)]):

```
select ltrim('         HGHJG') from dual;
```

LTRIM('HGHJG')
HGHJG

7. rpad(char1 ,n [,char2]):

```
select rpad('never',28,'again') from dual
```

RPAD('NEVER',28,'AGAIN')
neveragainagainagainagainaga

8. rtrim(string [,char(s)]):

select rtrim('Priyal Singla ') from dual;

RTRIM('PRIYALSINGLA')
Priyal Singla

9. replace(char ,search_string , replacement_string):

```
select replace('everywhere','e','r') from dual
```

REPLACE('EVERYWHERE','E','R')
rvrrywhrrr

10. substr(string ,position ,substring length):

```
select substr('sql assignment',3,8) from dual
```

SUBSTR('SQLASSIGNMENT',3,8)
l assign

11. initcap(char):

```
12. select initcap('abcdefg') from dual
```

INITCAP('ABCDEFG')
Abcdefg

13. lower(string):

```
Select lower ('abcgdef') from dua
```

LOWER('ABCGDEF')
abcgdef

14. upper(string):

```
15. select upper('abcgdef') from dual
```

UPPER('ABCGDEF')
ABCGDEF

16. translate(char ,from string ,to string):

```
select translate('abcgdef','abc','xyzw') from dual
```

TRANSLATE('ABCGDEF','ABC','XYZW')
xyzgdef

17. abs(n):

select abs(-10) from dual;

ABS(-10)
10

18. ceil(n):

select ceil(3.44) from dual;

CEIL(3.44)
4

19. **cos(n):**

select cos(2) from dual;

COS(2)
-.41614683654714238699756822950076218977

20. exp(n):
select exp(1) from dual;

EXP(1)
2.71828182845904523536028747135266249776

21. floor(n):
select floor(3.56) from dual;

FLOOR(3.56)
3

22. mod(m ,n):
select mod(5,3) from dual;

MOD(5,3)
2

21. power(x ,y):
select power(5,3) from dual;

POWER(5,3)
125

22. round(x [,y]):
select round(12.6395,2) from dual;

ROUND(12.6395,2)
12.64

23. sign(n):

select sign(-1234) from dual;

SIGN(-1234)
-1

24. sqrt(n):

select sqrt(36) from dual;

SQRT(36)
6

25. trunc(x ,n):

select trunc(23.9187,2) from dual;

TRUNC(23.9187,2)
23.91

26. sysdate:

select sysdate from dual;

SYSDATE
04-FEB-23

27. add_months(d ,n):

select add_months('23-Jul-2022',10) from dual;

ADD_MONTHS('23-JUL-2022',10)
23-MAY-23

28. last_day():

select last_day('01-Jan-2020') from dual;

LAST_DAY('01-JAN-2020')
31-JAN-20

29. months_between(date1 ,date2):

select months_between('05-Aug-2022','12-jul-2022') from dual;

MONTHS_BETWEEN('05-AUG-2022','12-JUL-2022')
.774193548387096774193548387096774193548

30. next_day(date ,char):

select next_day('03-Feb-2023',2) from dual;

NEXT_DAY('03-FEB-2023',2)
06-FEB-23

31. greatest(expr):

select greatest(1,2,6) from dual;

GREATEST(1,2,6)
6

32. least(expr):

select least(1,2,6) from dual;

LEAST(1,2,6)
1

Q2) Display current time in hour : min : sec format

select to_char(systimestamp,'HH-MI-SS') from dual;

TO_CHAR(SYSTIMESTAMP,'HH-MI-SS')
05-34-51

Q4) Store any date value in hiredate column of table?

```
1  alter table Emp add hiredate date;
2  update Emp set hiredate='02-march-2023' where Ename='Priya';
3  select * from Emp;
```

Table altered.

1 row(s) updated.

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO	HIREDATE
7839	Rohit	Manager	1000	-	10	-
7840	Priya	President	4000	-	20	02-MAR-23
7823	Sbyam	Assistant	5000	-	30	-
7339	Anita	Manager	1000	-	10	-
7271	Manish	Clerk	4000	-	40	-
7548	Gitika	Analyst	1200	-	50	-
7182	Nandini	Salesman	1500	-	60	-
7833	Karnika	Analyst	1200	-	50	-
7327	Sona	Manager	2000	-	10	-
7289	Tia	Clerk	1000	-	20	-

Q5) Display name of employee(s) who join the company in 1985?

```
1  select Ename from Emp where to_char(dob,'yyyy')=1980;
```

```
no data found
```

Q6) Display name of the employee(s) who join the company this year?

```
1  select Ename from Emp where to_char(dob,'yyyy')=to_char(sysdate,'yyyy');
```

LAB ASSIGNMENT – 4

1. Create table emp which has the following attributes (employee table)
(@empno, ename, job, sal, deptno)
Where empno is primary key, ename is unique, job in (Prof, AP, and Lect), sal is not NULL, and deptno default is 10. Insert appropriate records, check error messages in case of violation and list all the constraint names for given table.

```
1  create table emp(
2      empno number(15) primary key,
3      ename varchar(30) unique,
4      jobs varchar(10) Check(jobs in ('Prof','AP','Lect')),
5      sal number(10) not null,
6      deptno number(10) default(10)
7  );
8  insert into emp values(12,'Priyal','Prof',10000,23);
9  select * from emp;
10 insert into emp values(12,'Diksha','AP',1000,13);
11 insert into emp values(13,'Priyal','AP',10000,123);
12 insert into emp values(14,'Ashish','student',20000,33);
13 insert into emp values(14,'Manisha','AP',NULL,40);
14 insert into emp (empno,ename,jobs,sal) values(14,'Kashish','Prof',30000);
15 select * from emp;
```

```
Table created.

1 row(s) inserted.
```

EMPNO	ENAME	JOBS	SAL	DEPTNO
12	Priyal	Prof	10000	23

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```
ORA-00001: unique constraint (SQL_SGDNSMDBTLDGMIPGNXOWUHZWV.SYS_C00112947463) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

ORA-00001: unique constraint (SQL_SGDNSMDBTLDGMIPGNXOWUHZWV.SYS_C00112947464) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

ORA-02290: check constraint (SQL_SGDNSMDBTLDGMIPGNXOWUHZWV.SYS_C00112947462) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

ORA-01400: cannot insert NULL into ("SQL_SGDNSMDBTLDGMIPGNXOWUHZWV"."EMP"."SAL") ORA-06512: at "SYS.DBMS_SQL", line 1721

1 row(s) inserted.
```

EMPNO	ENAME	JOBS	SAL	DEPTNO
12	Priyal	Prof	10000	23
14	Kashish	Prof	30000	10

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```
2 rows selected.
```

2. Create table book:
Rno number—PK
DOI-date
DOR-date
DOR>DOI
Insert appropriate records, check error messages in case of violation and list all the constraint names for given table.

```sql
create table book(
    Rno int primary key,
    DOI date,
    DOR date,
    check (DOR>DOI)
);
insert into book values (101,'12-Jan-2010','26-Dec-2022');
select * from book;
insert into book values (101,'02-Jun-2011','16-Sep-2012');
insert into book values (104,'11-Apr-2023','05-May-2011');
select * from book;
```

```
Table created.

1 row(s) inserted.
```

RNO	DOI	DOR
101	12-JAN-10	26-DEC-22

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```
ORA-00001: unique constraint (SQL_DGBZCHFPNLZUCAVTDIKYGXIIZ.SYS_C00112951524) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

ORA-02290: check constraint (SQL_DGBZCHFPNLZUCAVTDIKYGXIIZ.SYS_C00112951523) violated ORA-06512: at "SYS.DBMS_SQL", line 1721
```

RNO	DOI	DOR
101	12-JAN-10	26-DEC-22

Download CSV

3. Create table st
Rno-Number
Class-Char
Marks-Number
Primary key(rno,class)
Marks>0
Insert appropriate records, check error messages in case of violation and list all the constraint names for given table.

```
1  create table st(
2      Rno number(10),
3      Class varchar(10),
4      marks number(5) check (marks>0),
5      primary key (Rno,Class)
6  );
7  insert into st values (101,'first',62);
8  insert into st values (101,'second',45);
9  insert into st values (102,'first',23);
10 select * from st;
11 insert into st values (101,'first',98);
12 insert into st values (104,'third',-2);
```

```
Table created.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

RNO	CLASS	MARKS
101	first	62
101	second	45
102	first	23

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```
3 rows selected.

ORA-00001: unique constraint (SQL_DGBZCHFPNLZUCAVTDIKYGXIIZ.SYS_C00112951738) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

ORA-02290: check constraint (SQL_DGBZCHFPNLZUCAVTDIKYGXIIZ.SYS_C00112951737) violated ORA-06512: at "SYS.DBMS_SQL", line 1721
```

4. Create table S which has the following attributes (Salesperson table)
(sno, sname, city)
Where sno is primary key

```
create table s(
    sno int primary key,
    sname varchar(20),
    city varchar(20)
);
insert into s values(1,'Amitesh','Patiala');
insert into s values(2,'Priyal','Delhi');
select * from s;
```

```
Table created.

1 row(s) inserted.

1 row(s) inserted.
```

SNO	SNAME	CITY
1	Amitesh	Patiala
2	Priyal	Delhi

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5. Create table P which has the following attributes (Part table)
(pno, pname, color)

Where pno is primary key

```
create table p(
    pno int primary key,
    pname varchar(20),
    color varchar(10)
);
insert into p values(1,'Pen','Black');
insert into p values(2,'Shirt','White');
insert into p values(3,'Bottle','Green');
select * from p;
```

```
Table created.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

PNO	PNAME	COLOR
1	Pen	Black
2	Shirt	White
3	Bottle	Green

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6. Create table SP which has the following attributes (sno, pno qty)

Where combination of (sno, pno) is primary key, also sno and pno are foreign keys

```
create table sp(
    sno int,
    pno int,
    qty int,
    primary key(sno,pno),
    foreign key (sno) references s(sno),
    foreign key (pno) references p(pno)
);
```

```
Table created.
```

7. Create table dept which has the following attributes (department table)
(deptno, dname)
Where deptno is primary key, dname in (Acc, comp, elect)

```
create table dept(
    deptno int primary key,
    dname varchar(5) check (dname in ('Acc','comp','elect'))
);
```

```
Table created.
```

8. Create table emp which has the following attributes (employee table)
(@empno, ename, job, sal, deptno)
Where empno is primary key, ename is unique, job in (Prof, AP, and Lect), sal is not NULL, and deptno is foreign key

```
create table emp(
    empno int primary key,
    ename varchar(25) unique,
    job varchar(5) check(job in ('Prof','AP','Lect')),
    salary number(20) not null,
    deptno int references dept(deptno)
);

```

```
Table created.
```

LAB ASSIGNMENT – 5

1. Create the following tables and insert some tuples in these tables shown below. Where *sid* is the *primary key* for the *Sailors* table, *bid* is the primary key for the *Boats* table and *sid* and *bid* are the *foreign keys* for the *Reserves* table referencing to the *Sailors* and *Boats* table, respectively.

Sailors(*sid:* integer, *sname:* string, *rating:* integer, *age:* real)
Boats(*bid:* integer, *bname:* string, *color:* string)
Reserves(*sid:* integer, *bid:* integer, *day:* date)

After inserting the records in these tables, the instances should look like as follows:

Sailors

sid	*sname*	*rating*	*age*
22	Dustin	7	45.0
29	Brutus	1	33.0
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35.0
64	Horatio	7	35.0
71	Zorba	10	16.0
74	Horatio	9	35.0
85	Art	3	25.5
95	Bob	3	63.5

Reserves

sid	*bid*	*day*
22	101	10/10/98
22	102	10/10/98
22	103	10/8/98
22	104	10/7/98
31	102	11/10/98
31	103	11/6/98
31	104	11/12/98
64	101	9/5/98
64	102	9/8/98
74	103	9/8/98

Boats

bid	*bname*	*color*
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

```sql
create table Sailors(
    sid int primary key,
    ename varchar(20),
    rating int,
    age number(3)
);
insert into Sailors values (22,'Dustin',7,45.0);
insert into Sailors values (29,'Brutus',1,33.0);
insert into Sailors values (31,'Lubber',8,55.5);
insert into Sailors values (32,'Andy',8,25.5);
insert into Sailors values (58,'Rusty',10,35.0);
insert into Sailors values (64,'Horatio',7,35.5);
insert into Sailors values (71,'Zobra',10,16.0);
insert into Sailors values (74,'Horatio',9,35.0);
insert into Sailors values (85,'Art',3,25.5);
insert into Sailors values (95,'Bob',3,63.5);

create table Boats(
    bid int primary key,
    bname varchar(20),
    color varchar(10)
);
insert into Boats values (101,'Interlake','blue');
insert into Boats values (102,'Interlake','red');
insert into Boats values (103,'Clipper','green');
insert into Boats values (104,'Marine','red');

select * from Sailors;
select * from Boats;
```

```sql
create table Reserves(
    sid int references Sailors(sid),
    bid int references Boats(bid),
    day date
);
insert into Reserves values(22,101,'10-Sep-1998');
insert into Reserves values(22,102,'10-Sep-1998');
insert into Reserves values(22,103,'10-Aug-1998');
insert into Reserves values(22,104,'10-Jul-1998');
insert into Reserves values(31,102,'11-Sep-1998');
insert into Reserves values(31,103,'11-Jun-1998');
insert into Reserves values(31,104,'11-Dec-1998');
insert into Reserves values(64,101,'09-May-1998');
insert into Reserves values(64,102,'09-Aug-1998');
insert into Reserves values(74,103,'09-Aug-1998');
select * from Reserves;
```

SID	ENAME	RATING	AGE
22	Dustin	7	45
29	Brutus	1	33
31	Lubber	8	56
32	Andy	8	26
58	Rusty	10	35
64	Horatio	7	36
71	Zobra	10	16
74	Horatio	9	35
85	Art	3	26
95	Bob	3	64

Download CSV

Sailors

BID	BNAME	COLOR
102	Interlake	red
103	Clipper	green
104	Marine	red
101	Interlake	blue

Download CSV

Boats

SID	BID	DAY
22	101	10-SEP-98
22	102	10-SEP-98
22	103	10-AUG-98
22	104	10-JUL-98
31	102	11-SEP-98
31	103	11-JUN-98
31	104	11-DEC-98
64	101	09-MAY-98
64	102	09-AUG-98
74	103	09-AUG-98

Download CSV

Reserves

2. Write SQL command for the
i) Show the names and ages of all sailors.

```
1  select ename,age from Sailors;
```

ENAME	AGE
Dustin	45
Brutus	33
Lubber	56
Andy	26
Rusty	35
Horatio	36
Zobra	16
Horatio	35
Art	26
Bob	64

Download CSV

10 rows selected.

ii) Show the details of the b

```
1  select * from Boats where color in ('red','blue');
```

BID	BNAME	COLOR
101	Interlake	blue
102	Interlake	red
104	Marine	red

Download CSV

3 rows selected.

iii) Find the oldest and youngest sailors' age.

```
1  select min(age) as Youngest from Sailors;
2  select max(age) as Oldest from Sailors;
```

YOUNGEST
16

Download CSV

OLDEST
64

Download CSV

iv) Find the ages of sailors whose name begins and ends with B and has at least three characters.

```
1  select age from Sailors where ename like 'B_%b';
```

AGE
64

Download CSV

v) Show the average rating of the sailors.

```
1  select avg(rating) from Sailors;
```

AVG(RATING)
6.6

Download CSV

vi) Find all sailors with a rating above 7.

```
1  select ename from Sailors where rating>7;
```

ENAME
Lubber
Andy
Rusty
Zobra
Horatio

Download CSV

5 rows selected.

vii) Find the the number of boats reserved by sailor named Horatio.

```
1  select count(day) from Sailors,Reserves,Boats
2  where Sailors.ename = 'Horatio'
3  and Reserves.sid = Sailors.sid
4  and Reserves.bid = Boats.bid;
```

COUNT(DAY)
3

Download CSV

viii) Find the colors of boats reserved by Lubber.

```
1  select color from Sailors,Boats,Reserves
2  where Sailors.ename = 'Lubber'
3  and Reserves.sid = Sailors.sid
4  and Reserves.bid = Boats.bid;
```

COLOR
red
green
red

Download CSV

3 rows selected.

ix) Show the details of the sailors who have reserved the boat with bid 102.

```
1  select * from Sailors,Boats,Reserves
2  where Boats.bid = 102
3  and Reserves.bid = 102
4  and Reserves.sid = Sailors.sid;
```

SID	ENAME	RATING	AGE	BID	BNAME	COLOR	SID	BID	DAY
22	Dustin	7	45	102	Interlake	red	22	102	10-SEP-98
31	Lubber	8	56	102	Interlake	red	31	102	11-SEP-98
64	Horatio	7	36	102	Interlake	red	64	102	09-AUG-98

Download CSV

3 rows selected.

x) Find the sid of sailors who have reserved green boats.

```
1  select Sailors.sid,ename from Sailors,Boats,Reserves
2  where Boats.color = 'green'
3  and Reserves.bid = Boats.bid
4  and Reserves.sid = Sailors.sid;
```

SID	ENAME
22	Dustin
31	Lubber
74	Horatio

Download CSV

3 rows selected.

xi) Find the names of sailors who have reserved boat number 103.

```
1  select ename from Sailors,Boats,Reserves
2  where Boats.bid = 103
3  and Reserves.bid = Boats.bid
4  and Reserves.sid = Sailors.sid
```

ENAME
Dustin
Lubber
Horatio

Download CSV

3 rows selected.

xii) Find the sids and names of sailors who have reserved a red boat

```
1  select Sailors.sid,ename from Sailors,Boats,Reserves
2  where Boats.color = 'red'
3  and Reserves.bid = Boats.bid
4  and Reserves.sid = Sailors.sid
5  group by Sailors.sid,ename;
```

SID	ENAME
22	Dustin
64	Horatio
31	Lubber

Download CSV

3 rows selected.

xiii) Find the names of the sailors who have reserved a green or a blue boat.

```
1  select ename from Sailors,Boats,Reserves
2  where Boats.color in ('green','blue')
3  and Reserves.bid = Boats.bid
4  and Reserves.sid = Sailors.sid
5  group by ename;
```

ENAME
Lubber
Horatio
Dustin

Download CSV

3 rows selected.

xiv) Find the names of sailors who have reserved both a red and a green boat.

```
1  select ename from Sailors,Boats,Reserves
2  where Boats.color = 'red'
3  and Reserves.bid = Boats.bid
4  and Reserves.sid = Sailors.sid
5  INTERSECT
6  select ename from Sailors,Boats,Reserves
7  where Boats.color = 'green'
8  and Reserves.bid = Boats.bid
9  and Reserves.sid = Sailors.sid
```

ENAME
Dustin
Horatio
Lubber

Download CSV

3 rows selected.

xv) Find the names of sailors who have reserved at least one boat.

```
1  select ename from Sailors,Boats,Reserves
2  where Reserves.bid = Boats.bid
3  and Reserves.sid = Sailors.sid
4  group by ename;
```

ENAME
Lubber
Horatio
Dustin

Download CSV

3 rows selected.

LAB ASSIGNMENT – 6

1. **Display the system date**

```
select sysdate from dual;
```

2. **Display current day**

```
select to_char(sysdate,'day')from dual;
```

3. **Display current month and spell out year**

```
select to_char(sysdate,'yyyysp'),to_char(sysdate,'day') from dual;
```

4. **Display spell out current date**

```
select to_char(sysdate,'ddsp')from dual;
```

5. **Check whether it is AM or PM right now**

```
select to_char(sysdate,'am')from dual;
```

6. **Display the date of next Friday**

```
select next_day(sysdate,'Friday')from dual;
```

7. **Round the system date on month**

```
select round(sysdate,'month') from dual;
```

8. **Truncate the system date on month**

```
select trunc(sysdate,'month') from dual;
```

9. **Round the system date on year**

```
select trunc(sysdate,'year') from dual;
```

10. **Truncate the system date on year**

```
select round(sysdate,'year') from dual;
```

11. **Find the day after three days**

```
select to_char(sysdate+3,'day')from dual;
```

Queries Based on EMP table (Assignment 2)

12. Display day of date of joining column

13. Display those employees who join the company on Monday

14. Display those employees who join the company this month

15. Display those employees who join the company in last 30 days

```
create table Employ2(Empno number(10),Name varchar(10),DOJ date);
insert into Employ2 values(101603206, 'Nikhil', '08-Aug-2017'); insert into
Employ2 values(101603207, 'Nishant', '09-Jul-2017'); insert into Employ2
values(101603208, 'Chhikara', '10-sept-2017'); insert into Employ2
values(101603209, 'Madan', '21-May-2017'); insert into Employ2
values(101603210, 'Ravi', '12-April-1996');
SELECT TO_CHAR(DOB,'day') FROM Employ2;
M-1)SELECT Name FROM Employ2 where TO_CHAR(DOB,'fmday')='monday'; M-2)SELECT
Name FROM Employ2 where TO_CHAR(DOB,'fmdy')='mon';
select round(sysdate,'month') from dual;
select trunc(sysdate,'month') from dual;
select trunc(sysdate,'year') from dual;
SELECT Name FROM Employ2
SELECT Name FROM Employ2
```

Create a table train having three four columns
16. Train Number, date of Departure, time of departure, time of arrival
17. Insert five columns in train table
18. Display all the records
19. Display the time values inserted in the columns
20. Display those trains which arrived on PM
21. Display train number who are going to depart in next on hour.

```
create table Train(
Train_NUmber Number(10),
date_depart date,
time_arrival timestamp,
time_depart timestamp
);
where TO_CHAR(DOB,'fmmon')='sept';
Assignment 3
where DOB between sysdate-30 and
sysdate;
11:23:56','29-
11:23:56','19-
insert into Train values(12345,'29-Aug-2017', '29-Aug-2017 Aug-2017
11:25:56');
insert into Train values(16754,'19-Aug-2017','19-Aug-2017 Aug-2017
11:25:56');
insert into Train values(16823,'21-Aug-2017','21-Aug-2017 11:13:56pm','21-
Aug-2017 11:15:56pm');
insert into Train values(16089,'22-Aug-2017','22-Aug-2017 11:13:56pm','22-
Aug-2017 11:15:56am');
insert into Train values(16157,'23-Aug-2017','23-Aug-2017 11:13:56pm','23-
Aug-2017 11:15:56pm');
select * from Train;
select * from Train where to_char(time_arrival, 'pm')='pm';
select to_char(time_arrival,'HH:MI:SS') from Train;
insert into Train values(16123,'23-Aug-2017','29-Aug-2017 4:31:56pm','29-
Aug-2017 4:55:56pm');
select * from Train where time_depart between sysdate and sysdate+1/24;
```