DBMS LAB ASSIGNMENTS

NAME : Vashuki Achari
ROLL   : 102103503
CLASS : 2CO18

LAB ASSIGNMENT 1

ANSWERS :

```
1. create table student  (
    Rno number(6),
    Name varchar(20),
    DOB  date,
    Gender varchar(6),
    Class varchar(6),
    College varchar(50),
    City varchar(50),
    Marks Number (8,2)
    )
```

```
2. insert into student values (12,'vashu','12-
    mar-23','M','CO18','TIET','Patiala',92);
    insert into student values (5,'puru','12-mar-23','M','CO18','TIET','Nabha',67);
    insert into student values (9,'tejaswi','12-
mar-23','M','CO18','TIET','Amritsar',31);
    insert into student values (12,'bugga','12-
mar-23','F','CO18','TIET','Patiala',29.80);
    insert into student values (15,'raj','12-mar-23','M','CO18','TIET','Patiala',30);
```

```
3. select * from student
```

RNO	NAME	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
12	vashu	12—MAR—23	M	C018	TIET	Patiala	92
5	puru	12—MAR—23	M	C018	TIET	Nabha	67
9	tejaswi	12—MAR—23	M	C018	TIET	Amritsar	31
12	bugga	12—MAR—23	F	C018	TIET	Patiala	29.8
15	raj	12—MAR—23	M	C018	TIET	Patiala	30

4. desc student

TABLE STUDENT

Column	Null?	Type
RNO	—	NUMBER(6,0)
NAME	—	VARCHAR2(20)
DOB	—	DATE
GENDER	—	VARCHAR2(6)
CLASS	—	VARCHAR2(6)
COLLEGE	—	VARCHAR2(50)
CITY	—	VARCHAR2(50)
MARKS	—	NUMBER(8,2)

5. select Rno, Name ,Class from student where City ='Patiala'

RNO	NAME	CLASS
12	vashu	C018
12	bugga	C018
15	raj	C018

6. select * from student order by marks asc

RNO	NAME	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
12	bugga	12–MAR–23	F	C018	TIET	Patiala	29.8
15	raj	12–MAR–23	M	C018	TIET	Patiala	30
9	tejaswi	12–MAR–23	M	C018	TIET	Amritsar	31
5	puru	12–MAR–23	M	C018	TIET	Nabha	67
12	vashu	12–MAR–23	M	C018	TIET	Patiala	92

7. update student set marks =89 where Rno =5

8. update student set Name='jayant' , City='delhi' where Rno=9
   select * from student

RNO	NAME	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
12	vashu	12—MAR—23	M	C018	TIET	Patiala	92
5	puru	12—MAR—23	M	C018	TIET	Nabha	89
9	jayant	12—MAR—23	M	C018	TIET	delhi	31
12	bugga	12—MAR—23	F	C018	TIET	Patiala	29.8
15	raj	12—MAR—23	M	C018	TIET	Patiala	30

9. delete from student where City = 'Amritsar'

RNO	NAME	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
12	vashu	12—MAR—23	M	C018	TIET	Patiala	92
5	puru	12—MAR—23	M	C018	TIET	Nabha	89
9	jayant	12—MAR—23	M	C018	TIET	delhi	31
15	raj	12—MAR—23	M	C018	TIET	Patiala	30

10. delete from student where Marks < 30
    select * from student

RNO	NAME	DOB	GENDER	CLASS	COLLEGE	CITY	MARKS
12	vashu	12—MAR—23	M	C018	TIET	Patiala	92
5	puru	12—MAR—23	M	C018	TIET	Nabha	89
9	jayant	12—MAR—23	M	C018	TIET	delhi	31
15	raj	12—MAR—23	M	C018	TIET	Patiala	30

LAB ASSIGNMENT 2

ANSWERS :

```
create table EMP(
 EmpNo number(10),
 Ename varchar(20),
 Job varchar(20),
 Salary number(10),
 Commission number(10),
 DeptNo number(5)
 );

insert into EMP values(1,'John','salesperson',8000,100,20);
insert into EMP values(4,'Aalex','Clerk',1700,120,10);
insert into EMP values(7,'Raj','Salesperson',1500,100,20);
insert into EMP values(2,'Abhi','clerk',2300,100,10);
insert into EMP values(11,'Rama','Cook',800,NULL,30);
```

1. select EmpNo , Ename from EMP where DeptNo=10

EMPNO	ENAME
4	Aalex
2	Abhi

2. select Ename from EMP where Job = 'Clerk' and Salary > 2000

ENAME
Abhi

3. select Ename from EMP where Job = 'Salesperson' or Job = 'Clerk'

ENAME
Aalex
Raj
Abhi

4. select * from EMP where Salary between 2000 and 3000

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO
2	Abhi	Clerk	2300	100	10

5. SELECT * FROM EMP WHERE DeptNO IN (10, 20, 30);

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO
1	John	salesperson	8000	100	20
4	Aalex	Clerk	1700	120	10
7	Raj	Salesperson	1500	100	20
2	Abhi	Clerk	2300	100	10
11	Rama	Cook	800	–	30

6. SELECT Ename FROM EMP WHERE Commission IS NULL;

ENAME
Rama

7. SELECT DeptNO, Salary FROM EMP ORDER BY DeptNO, Salary DESC;

DEPTNO	SALARY
10	2300
10	1700
20	8000
20	1500
30	800

8. SELECT Ename FROM EMP WHERE Ename LIKE '%a%a%' OR Ename LIKE '%A%A%';

ENAME
Rama

9. SELECT Ename FROM EMP WHERE LOWER(Ename) like '%b%'

ENAME
Abhi

10. SELECT Ename FROM EMP WHERE LOWER(Ename) like '_a%' OR LOWER(Ename) like '%a_' OR LOWER(Ename) like '_A%' OR LOWER(Ename) like '%A_'

ENAME
Aalex
Raj
Rama

11. SELECT MIN(Salary) AS Min_Salary, MAX(Salary) AS Max_Salary, AVG(Salary) AS Avg_Salary FROM EMP WHERE DeptNO = 10;

MIN_SALARY	MAX_SALARY	AVG_SALARY
1700	2300	2000

12. SELECT COUNT(*) FROM EMP WHERE DeptNO = 20;

COUNT(*)
2

13. SELECT SUM(Salary) FROM EMP WHERE Job = 'Clerk';

SUM(SALARY)
1700

14. select SYSDATE from EMP

SYSDATE
04-FEB-23
04-FEB-23
04-FEB-23
04-FEB-23
04-FEB-23

15. SELECT (12 * 12) / 13 from EMP;

CHR(65)
A

2. select concat ('hello','vashu') from dual

CONCAT('HELLO','VASHU')
hellovashu

3. select instr('hello vashuki','l') from dual

INSTR('HELLOVASHUKI','L')
3

4. select length('hello vashuki') from dual

LENGTH('HELLOVASHUKI')
13

5. select lpad('hello vashuki',20,'ABC') from dual

LPAD('HELLOVASHUKI',20,'ABC')
ABCABCAhello vashuki

6. select ltrim('   hello vashuki') from dual

LTRIM('HELLOVASHUKI')
hello vashuki

7. select rpad('hello vashuki',20,'ABC') from dual

RPAD('HELLOVASHUKI',20,'ABC')
hello vashukiABCABCA

8. select rtrim('hello vashuki   ') from dual

RTRIM('HELLOVASHUKI')
hello vashuki

9. select replace('hello vashuki','vashuki','vijay') from dual

REPLACE('HELLOVASHUKI','VASHUKI','VIJAY')
hello vijay

10. select substr('hello vashuki',7,5) from dual

SUBSTR('HELLOVASHUKI',7,5)
vashu

11. select initcap('hello vashuki') from dual

INITCAP('HELLOVASHUKI')
Hello Vashuki

12. select lower('Hello Vashuki') from dual

LOWER('HELLOVASHUKI')
hello vashuki

13. select upper('hello vashuki') from dual

UPPER('HELLOVASHUKI')
HELLO VASHUKI

14. select translate('hello vashuki','vashuki','tejaswi') from dual

TRANSLATE('HELLOVASHUKI','VASHUKI','TEJASWI')
aello tejaswi

15. select abs(-234.5) from dual

ABS(-234.5)
234.5

16. select ceil(27.5) from dual

CEIL(27.5)
28

17. select cos(2) from dual

COS(2)
-.416146836547142386997568229500076218977

18. select exp(2) from dual

EXP(2)
7.3890560989306502272304274605750078132

19. select floor(2.87) from dual

FLOOR(2.87)
2

20. select mod(15,2) from dual

MOD(15,2)
1

21. select power(4,2) from dual

POWER(4,2)
16

22. select round(30.56) from dual

ROUND(30.56)
31

23. select sign(-4) from dual

SIGN(-4)
-1

24. select sqrt(4) from dual

SQRT(4)
2

25. select trunc(46.3786,2) from dual

TRUNC(46.3786,2)
46.37

26. select sysdate from dual

SYSDATE
05-FEB-23

27. select add_months(sysdate, 2) from dual

ADD_MONTHS(SYSDATE,2)
05-APR-23

28. select last_day(sysdate) from dual

LAST_DAY(SYSDATE)
28-FEB-23

29. select months_between(sysdate, sysdate+60) from dual

MONTHS_BETWEEN(SYSDATE,SYSDATE+60)
-2.0322580645161290322580645161290322580 6

30. select next_day(sysdate, 'TUESDAY') from dual

NEXT_DAY(SYSDATE,'TUESDAY')
07-FEB-23

31. select greatest(1, 2, 3, 4, 5) from dual

GREATEST(1,2,3,4,5)
5

32. select least(1, 2, 3, 4, 5) from dual

LEAST(1,2,3,4,5)
1

Q2. select to_char(current_timestamp, 'HH24:MI:SS') from dual

TO_CHAR(CURRENT_TIMESTAMP,'HH24:MI:SS')
23:22:46

Q3. EMP TABLE:
Create table emp(
id number(6) primary key,
name varchar2(100),
salary number(10),
commission number(10),
hiredate date
);
select salary+commission from emp;

SALARY+COMMISSION
8100
1820
1600
2400
–

Q3. select SUM(Salary + Commission) as Salary_Commission from EMP

SALARY_COMMISSION
13920

Q4. insert into EMP (EmpNo, hiredate) values(10, to_date('2010/09/21', 'yyyy/mm/dd'));
    insert into EMP (EmpNo, hiredate) values(7, to_date('1985/09/21', 'yyyy/mm/dd'));
    insert into EMP (EmpNo, hiredate) values(7, to_date('2023/09/21', 'yyyy/mm/dd'));

Q5. select * from emp where trim(to_char(hiredate, 'YYYY')) = 1985;

EMPNO	ENAME	HIREDATE	JOB	SALARY	COMMISSION	DEPTNO
7	–	21–SEP–85	–	–	–	–

Q6. select * from EMP where trim(to_char(hiredate, 'YYYY')) =

trim(to_char(sysdate,'YYYY'));

EMPNO	ENAME	HIREDATE	JOB	SALARY	COMMISSION	DEPTNO
7	–	21–SEP–23	–	–	–	–

LAB ASSIGNMENT 4

ANSWERS :

Q1.
create table emop(
empno number(20) primary key,
ename varchar2(20) unique,
job varchar2(20) check(job in('prof','lect','ap')),
salary number(20) not null,
deptno number(20) default 10
);

insert into emop values(101,'puru','ap','1000',default);
insert into emop values(102,'vashu','lect',2000,default);
insert into emop values(103,'tejas','ap',3000,default);

select * from emop;

EMPNO	ENAME	JOB	SALARY	DEPTNO
101	puru	ap	1000	10
102	vashu	lect	2000	10
103	tejas	ap	3000	10

select * from user_constraints;

OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SEARCH_CONDITION	SEARCH_CONDITION_VC	R_OWNER	R_CONSTRAINT_NAME	DELETE_
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998562	C	EMOP	"SALARY" IS NOT NULL	"SALARY" IS NOT NULL	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998563	C	EMOP	job in('prof','lect','ap')	job in('prof','lect','ap')	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998564	P	EMOP	–	–	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998565	U	EMOP	–	–	–	–	–

select * from user_constraints where table_name='EMOP';

OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SEARCH_CONDITION	SEARCH_CONDITION_VC	R_OWNER	R_CONSTRAINT_NAME	DELETE_
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998562	C	EMOP	"SALARY" IS NOT NULL	"SALARY" IS NOT NULL	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998563	C	EMOP	job in('prof','lect','ap')	job in('prof','lect','ap')	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998564	P	EMOP	–	–	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998565	U	EMOP	–	–	–	–	–

select * from user_cons_columns where table_name='EMOP';

OWNER	CONSTRAINT_NAME	TABLE_NAME	COLUMN_NAME	POSITION
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998562	EMOP	SALARY	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998563	EMOP	JOB	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998564	EMOP	EMPNO	1
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998565	EMOP	ENAME	1

Q2.
create table book(
    rno number(10) primary key,
    doi date,
    dor date,
    constraint abc check(dor>doi)
    );

insert into book values(102,to_date('21-10-78','dd-mm-yyyy'),to_date('29-9-78','dd-mm-yyyy'));

select * from user_constraints;

OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SEARCH_CONDITION	SEARCH_CONDITION_VC	R_OWNER	R_CONSTRAINT_NAME	DELETE_
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	ABC	C	BOOK	dor>doi	dor>doi	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998562	C	EMOP	"SALARY" IS NOT NULL	"SALARY" IS NOT NULL	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998563	C	EMOP	job in('prof','lect','ap')	job in('prof','lect','ap')	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998564	P	EMOP	–	–	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998565	U	EMOP	–	–	–	–	–
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998687	P	BOOK	–	–	–	–	–

Q3.
create table st(
    rno number(10),
    class char(10),
    marks number(10) check(marks>0),
    primary key(rno,class)
    );

insert into st values(102,'btech',100);

select * from user_constraints where table_name='ST';

OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SEARCH_CONDITION	SEARCH_CONDITION_VC	R_OWNER	R_CONSTRAINT_NAME	DELETE_RULE	S
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998779	C	ST	marks>0	marks>0	–	–	–	EN
SQL_QDJATQBPEEPVRNNYUHXFPFTTH	SYS_C00112998780	P	ST	–	–	–	–	–	EN

Q4.
create table S(
    sno number(10) primary key,
    sname varchar(20),
    city varchar(20)
    );

insert into S values(10,'btech','patiala');
insert into S values(10,'bte','patia');

select * from S

SNO	SNAME	CITY
10	btech	patiala

Q5.
```
create table P(
   pno number(10) primary key,
   pname varchar(20),
   color varchar(20)
   );
```

insert into P values(10,'vashu','yellow');

select * from P

PNO	PNAME	COLOR
10	vashu	yellow

Q6.
```
create table SP(
sno number(10) ,
pno number(10),
qty number(10),
primary key(sno,pno),
foreign key(pno) references P,
foreign key(sno) references S
);
```

Q7.
```
create table dept(
   dno number(10) primary key ,
   dname varchar(20) check(dname in('acc','elect','comp'))
   );
```

desc dept

Column	Null?	Type
DNO	NOT NULL	NUMBER(10,0)
DNAME	—	VARCHAR2(20)

Q8.
```
create table emp(
    eno number(10) primary key ,
    dname varchar(20) unique,
    job varchar2(10) check(job in('ap','lect','prof')),
    sal number(10) not null,dno number(10),
    foreign key(dno) references dept
    );

    desc emp
```

Column	Null?	Type
ENO	NOT NULL	NUMBER(10,0)
DNAME	—	VARCHAR2(20)
JOB	—	VARCHAR2(10)
SAL	NOT NULL	NUMBER(10,0)
DNO	—	NUMBER(10,0)

LAB ASSIGNMENT 5 :

ANSWERS :

Q1.
```sql
create table sailors (
    sid int primary key,
    sname varchar(38),
    rating int,
    age float check (age > 16 and age < 110)
);

create table boats (
    bid int primary key,
    bname varchar(25),
    color varchar(21)
);

create table reserves (
    sid int,
    bid int,
    day date,
    foreign key (sid) references sailors (sid),
    foreign key (bid) references boats (bid)
);
```

Q2.

1. SELECT DISTINCT Sailors.sname, Sailors.age FROM Sailors

SNAME	AGE
Andy	25
Dustin	45
Art	25.5
Zorba	16
Lubber	55
Rusty	35
Horatio	35
Brutus	33
Bob	63.5

2. select * from Boats where lower(color) = 'red' or lower(color) = 'blue';

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

3. select max(age),min(age) from Sailors;

MAX(AGE)	MIN(AGE)
63.5	16

4. select age from Sailors where lower(sname) like 'b%b' and (length(sname) >= 3);

AGE
63.5

5. select avg(rating) from Sailors;

AVG(RATING)
6.6

6. SELECT Sailors.sid, Sailors.sname, Sailors.rating, Sailors.age FROM Sailors WHERE Sailors.rating > 7

SID	SNAME	RATING	AGE
31	Lubber	8	55
32	Andy	8	25
58	Rusty	10	35
71	Zorba	10	16
74	Horatio	9	35

7. select count(*) from Sailors, Reserves where Sailors.sid = Reserves.sid AND sname = 'Horatio';

COUNT(*)
3

8. select color from Sailors, Reserves, Boats where Sailors.sid = Reserves.sid AND Reserves.bid = Boats.bid AND sname = 'Lubber';
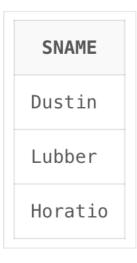
COLOR
red
green
red

9. select Sailors.* from Sailors,Reserves where Sailors.sid = Reserves.sid AND bid = 102;

SID	SNAME	RATING	AGE
22	Dustin	7	45
31	Lubber	8	55.5
64	Horatio	7	35

10. select Sailors.sid from Sailors,Reserves,Boats where Sailors.sid = Reserves.sid AND Reserves.bid = Boats.bid AND lower(color) = 'green';

SID
22
31
74

11. select sname from Sailors, Reserves where Sailors.sid = Reserves.sid AND bid = 103;

SNAME
Dustin
Lubber
Horatio

12. select Sailors.sid, sname from Sailors,Reserves,Boats where Sailors.sid = Reserves.sid AND Reserves.bid = Boats.bid AND

lower(color) = 'red';

SID	SNAME
22	Dustin
22	Dustin
31	Lubber
31	Lubber
64	Horatio

13. select sname from Sailors,Reserves,Boats where Sailors.sid = Reserves.sid AND Reserves.bid = Boats.bid AND (lower(color) = 'green' or lower(color) = 'blue');

SNAME
Dustin
Dustin
Lubber
Horatio
Horatio

14. SELECT distinct S.sname FROM Sailors S, Reserves R1, Boats B1, Reserves R2, Boats B2 WHERE S.sid = R1.sid AND R1.bid = B1.bid AND S.sid = R2.sid AND R2.bid = B2.bid AND B1.color='red' AND B2.color = 'green'

SNAME
Lubber
Dustin

15. select DISTINCT Sailors.sid,sname from Sailors,Reserves where Sailors.sid = Reserves.sid;

SID	SNAME
22	Dustin
64	Horatio
31	Lubber
74	Horatio

LAB ASSIGNMENT 6

1. select To_char(SYSDATE , 'MM-DD-YYYY') from dual;

TO_CHAR(SYSDATE,'MM-DD-YYYY')
02-18-2023

2. select to_char(date '2023-02-13' , 'DAY') from dual;

TO_CHAR(DATE'2023-02-13','DAY')
MONDAY

3. select to_char(sysdate, 'mm') from dual;
   select to_char(sysdate ,'year') from dual;

TO_CHAR(SYSDATE,'MM')
02

Download CSV

TO_CHAR(SYSDATE,'YEAR')
twenty twenty-three

4. select to_char(sysdate, 'ddsp MONTH YEAR') from dual;

TO_CHAR(SYSDATE,'DDSPMONTHYEAR')
eighteen FEBRUARY TWENTY TWENTY-THREE

5. select to_char(sysdate, 'hh:mm:ss PM') from dual;

TO_CHAR(SYSDATE,'HH:MM:SSPM')
03:02:35 PM

6. select next_day(sysdate ,'FRIDAY') from dual;

NEXT_DAY(SYSDATE,'FRIDAY')
24-FEB-23

7. select ROUND(TO_DATE(sysdate) ,'month') from dual;

ROUND(TO_DATE(SYSDATE),'MONTH')
01-MAR-23

8. select TRUNC(to_date(sysdate) , 'month') from dual;

TRUNC(TO_DATE(SYSDATE),'MONTH')
01-FEB-23

9. select ROUND(TO_DATE(sysdate) ,'year') from dual;

ROUND(TO_DATE(SYSDATE), 'YEAR')
01-JAN-23

10. select TRUNC(to_date(sysdate) , 'year') from dual;

TRUNC(TO_DATE(SYSDATE), 'YEAR')
01-JAN-23

11. select to_char(sysdate + 3, 'DAY') from dual;

TO_CHAR(SYSDATE+3, 'DAY')
THURSDAY

12. select Hiredate from emp;

HIREDATE
14-FEB-23
13-JAN-20
02-AUG-19
15-DEC-18
26-JUL-85

13. select * from emp where trim(to_char(hiredate, 'day')) = 'monday';

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO	HIREDATE
23	Vashu	Developer	100000	20000	10	13–JAN–20

14. select * from emp where trim(to_char(hiredate, 'mon yyyy')) = trim(to_char(sysdate, 'mon yyyy'));

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO	HIREDATE
1	Puru	Engineer	50000	–	10	14–FEB–23

15. select * from emp where sysdate - hiredate < 30;

EMPNO	ENAME	JOB	SALARY	COMMISSION	DEPTNO	HIREDATE
1	Puru	Engineer	50000	–	10	14–FEB–23

16.   create table train (
        trainNumber number(10),
        dateOfDept date,
        timeOfDept timestamp,
        timeOfArrival timestamp
        );

17.   insert into train values(101, '12-feb-23', '12-feb-23 08:34:00 AM', '12-feb-23 07:36:00 AM');
       insert into train values(102, '13-feb-23', '13-feb-23 09:23:00 AM', '12-feb-23 08:20:00 AM');
       insert into train values(103, '15-feb-23', '15-feb-23 12:26:00 PM', '12-feb-23 11:30:00 AM');
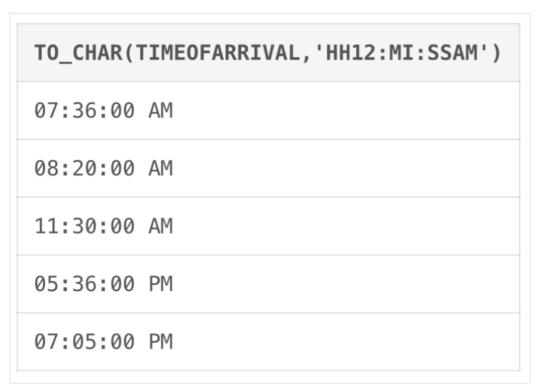   insert into train values(104, '17-feb-23', '17-feb-23 06:34:00 PM', '12-feb-23 05:36:00 PM');
       insert into train values(105, '28-feb-23', '28-feb-23 08:38:00 PM', '12-feb-23 07:05:00 PM');

18. select * from train;

TRAINNUMBER	DATEOFDEPT	TIMEOFDEPT	TIMEOFARRIVAL
101	12–FEB–23	12–FEB–23 08.34.00.000000 AM	12–FEB–23 07.36.00.000000 AM
102	13–FEB–23	13–FEB–23 09.23.00.000000 AM	12–FEB–23 08.20.00.000000 AM
103	15–FEB–23	15–FEB–23 12.26.00.000000 PM	12–FEB–23 11.30.00.000000 AM
104	17–FEB–23	17–FEB–23 06.34.00.000000 PM	12–FEB–23 05.36.00.000000 PM
105	28–FEB–23	28–FEB–23 08.38.00.000000 PM	12–FEB–23 07.05.00.000000 PM

19. select to_char(timeOfArrival, 'HH12:MI:SS AM') from train;

TO_CHAR(TIMEOFARRIVAL,'HH12:MI:SSAM')
07:36:00 AM
08:20:00 AM
11:30:00 AM
05:36:00 PM
07:05:00 PM

20. select TrainNumber from train where trim(to_char(timeOfArrival, 'AM')) = 'PM';

TRAINNUMBER
104
105

21. select trainNumber from train

where (to_char(timeOfDept,'hh') between to_char(sysdate, 'hh')
and to_char(sysdate + (0.000694 * 60), 'hh'))
and (to_char(timeOfDept,'dd-mon-yyyy') = to_char(sysdate, 'dd-mon-yyyy'));

TRAINNUMBER
104

LAB ASSIGNMENT 7

1) desc emp; desc book;
desc st; desc S; desc P; desc SP; desc dept; desc emp2;

TABLE EMP

Column	Null?	Type
EMPNO	NOT NULL	NUMBER(6,0)
ENAME	NOT NULL	VARCHAR2(20)
JOB	–	VARCHAR2(20)
SAL	NOT NULL	NUMBER(10,0)
DEPTNO	–	NUMBER(6,0)

2.   select table_name, constraint_type, constraint_name from
user_constraints where table_name = 'EMP';
select table_name, constraint_type, constraint_name from user_constraints
where table_name = 'BOOK';

select table_name, constraint_type, constraint_name from user_constraints where table_name = 'ST';
select table_name, constraint_type, constraint_name from user_constraints where table_name = 'S';
select table_name, constraint_type, constraint_name from user_constraints where table_name = 'P';
select table_name, constraint_type, constraint_name from user_constraints where table_name = 'SP';
select table_name, constraint_type, constraint_name from user_constraints where table_name = 'DEPT';
select table_name, constraint_type, constraint_name from user_constraints where table_name = 'EMP2';

3. alter table emp drop UNIQUE (ENAME);

4. alter table emp2 drop constraint SYS_C00114914132;

5. alter table emp2 add FOREIGN KEY (deptno) REFERENCES DEPT;

6. alter table emp modify(ename varchar(1000));

7. alter table dept modify(dname varchar(25));

8. alter table emp2 add comm varchar(10);

TABLE_NAME	CONSTRAINT_TYPE	CONSTRAINT_NAME
EMP	C	SYS_C00114510069
EMP	C	SYS_C00114510070
EMP	C	SYS_C00114510071
EMP	C	SYS_C00114510072
EMP	P	SYS_C00114510073
EMP	U	SYS_C00114510074

9. alter table J drop column city;

10. create table emp3 as select * from emp2;

11. create table dept_copy as select deptno as dno, dname as deptn from dept where 1 = 2;

12. update emp set ename = 'Puru Sachdeva', job = 'Prof' where empNo = 100;

13. delete from emp2 where deptno = (select deptno from dept where dname = 'comp');

14. alter table emp2 drop constraint SYS_C00114915157; drop table dept;

15. drop table emp3;

LAB ASSIGNMENT 8

QUESTION 1 :

```
CREATE TABLE Author (
ID INT PRIMARY KEY,
Name VARCHAR (50),
Birth_Year INT,
Death Year INT
);

CREATE TABLE Book (
ID INT PRIMARY KEY,
Author_ID INT,
Title VARCHAR(100),
Publish_Year INT,
Publishing_House VARCHAR (50),
Rating INT,
FOREIGN KEY (Author ID) REFERENCES Author (ID)
);
```

```
CREATE TABLE Adaptation (
Book_ID INT,
Type VARCHAR (50),
Title VARCHAR(100),
Release_Year INT,
Rating INT,
FOREIGN KEY (Book _ID) REFERENCES Book(ID)
);

INSERT INTO Author VALUES (1, 'Jane Austen', 1775, 1817);
INSERT INTO Author VALUES (2, 'Charles Dickens', 1812, 1870);
INSERT INTO Author VALUES (3, 'F. Scott Fitzgerald', 1896, 1940);
INSERT INTO Book VALUES (1, 1, 'Pride and Prejudice', 1813, 'T. Egerton,
Whitehall', 4);
INSERT INTO Book VALUES (2, 1, 'Sense and Sensibility', 1811, 'T. Egerton,
Whitehall', 3);
INSERT INTO Book VALUES (3, 2, 'Great Expectations', 1861, 'Chapman & Hall',
5);
INSERT INTO Book VALUES (4, 2, 'Oliver Twist', 1837, 'Richard Bentley', 4);
INSERT INTO Book VALUES (5, 3, 'The Great Gatsby', 1925, 'Charles Scribners
Sons', 4);
INSERT INTO Adaptation VALUES (1, 'Movie', 'Pride and Prejudice', 2005, 4);
INSERT INTO Adaptation VALUES (2, 'TV Series', 'Sense and Sensibility', 2008,
3);
INSERT INTO Adaptation VALUES (3, 'Movie',
'Great Expectations'
, 2012, 5);
INSERT INTO Adaptation VALUES (5, 'Movie', 'The Great Gatsby', 2013, 4);
```

QUESTION 2 :

(1)
```
SELECT Book. Title, Author. Name
FROM BOOK
JOIN Author
ON Book.Author _id = Author. ID;
```

TITLE	NAME
Pride and Prejudice	Jane Austen
Sense and Sensibility	Jane Austen
Great Expectations	Charles Dickens
Oliver Twist	Charles Dickens
The Great Gatsby	F. Scott Fitzgerald

(2)
UPDATE BOOK SET publish_year=2005 where Author_id=1;
SELECT Name, Title,publish_year
FROM Book
JOIN Author
ON Book.Author id = Author.ID
WHERE publish_year>=2005;

NAME	TITLE	PUBLISH_YEAR
Jane Austen	Pride and Prejudice	2005
Jane Austen	Sense and Sensibility	2005

(3)
SELECT book.tile AS book_title, adaptation.tile AS adaptation_title,
book.publish_year, adaptation.release year
FROM book JOIN adaptation
ON book.id = adaptation.book_id
WHERE book.rating < adaptation.rating AND (adaptation.release_year -
book.publish _year) <= 4

BOOK_TITLE	ADAPTATION_TITLE	PUBLISH_YEAR	RELEASE_YEAR
autobiography	life of me	2005	2007

(4)
SELECT tile, rating
FROM author INNER JOIN book
ON author.id = book.authorid
WHERE author.death year IS null

TILE	RATING
autobiography	6

(5)
SELECT Book. Title, Author. Name
FROM Book
FULL JOIN Author
ON Book.Author_id = Author. ID;

TITLE	NAME
Pride and Prejudice	Jane Austen
Sense and Sensibility	Jane Austen
Great Expectations	Charles Dickens
Oliver Twist	Charles Dickens
The Great Gatsby	F. Scott Fitzgerald

(6)
SELECT Book. Title, Author. Name
FROM Book
JOIN Author ON Book.Author ID = Author.ID
WHERE Author.Name = 'Charles Dickens';

TITLE	NAME
Great Expectations	Charles Dickens
Oliver Twist	Charles Dickens

(7)
SELECT book.tile, book.publishing_house, adaptation.tile, adaptation. type
FROM book RIGHT JOIN adaptation
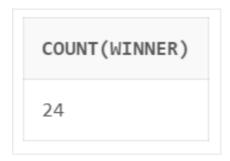ON book.id = adaptation.book id
WHERE adaptation.type = 'Movie'

TILE	PUBLISHING_HOUSE	TILE	TYPE
Oliver Twist	Richard Bentley	Oliver Twist	Movie
autobiography	The Publishing House	life of me	Movie
Pride and Prejudice	T.Egerton,Whitehall	Pride and Prejudice	Movie

(8)

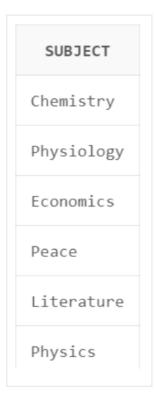| TILE	PUBLISHING_HOUSE	TILE	TYPE
Oliver Twist	Richard Bentley	Oliver Twist	Movie
autobiography	The Publishing House	life of me	Movie
Pride and Prejudice	T.Egerton,Whitehall	Pride and Prejudice	Movie

QUESTION 3 :

(1)
SELECT COUNT(winner) FROM nobel;

COUNT(WINNER)
24

(2)
SELECT DISTINCT subject FROM nobel;

SUBJECT
Chemistry
Physiology
Economics
Peace
Literature
Physics

(3)
SELECT COUNT(*) FROM nobel WHERE subject='Physics';

COUNT(*)
4

(4)
SELECT subject, COUNT (*)
FROM nobel

GROUP BY subject

SUBJECT	COUNT(*)
Chemistry	4
Physiology	4
Economics	4
Peace	4
Literature	4
Physics	4

(5)
SELECT subject,MIN(year) FROM nobel
GROUP BY subject

SUBJECT	MIN(YEAR)
Chemistry	1970
Physiology	1970
Economics	1970
Peace	1971
Literature	1970
Physics	1970

(6)
SELECT subject, COUNT (winner) from nobel where year=2000
GROUP BY subject;

no data found

(7)
SELECT DISTINCT subject, COUNT (DISTINCT winner)
FROM nobel
GROUP BY subject

SUBJECT	COUNT(DISTINCTWINNER)
Economics	4
Physiology	4
Chemistry	4
Peace	4
Literature	4
Physics	4

(8)
SELECT subject, COUNT (DISTINCT year)
FROM nobel
GROUP BY subject

SUBJECT	COUNT(DISTINCTYEAR)
Physiology	2
Chemistry	3
Economics	4
Peace	3
Literature	4
Physics	3

(9)
SELECT year FROM nobel
WHERE subject='Physics'
GROUP BY year
HAVING COUNT (year)=3

no data found

(10)
SELECT winner FROM nobel
GROUP BY winner
HAVING COUNT(winner)>1

no data found

(11)

```
SELECT winner FROM nobel
GROUP BY winner
HAVING COUNT (DISTINCT subject) > 1
```

no data found

(12)
```
SELECT year, subject FROM nobel
WHERE year = 2000
GROUP BY year, subject
HAVING COUNT(DISTINCT winner)=3
```

no data found