Day 1 (4/8/2022)
(in sql live in oracle ,you need to sign in)

create table instructor(id char,name varchar(20),position varchar(10));
//this is the place to create a table

desc instructor;
//show table

insert into instructor values(1,'Raman','manager');
insert into instructor values(2,'Sanjib','accountant');
insert into instructor values(3,'rohit','emp');
insert into instructor values(4,'prakas','emp');
// there you need to insert your details,

select *from instructor;
//this step is to show every details you input inside the table as sequence

create table emp2 as select *from instructor;
select *from emp2;
// create a copy of the above table and show the 2nd table

create table emp3 as select id,position *from instructor;
select *from emp3;
// we are copying table from the above table but taking only id and position so we didn't use *
before from
//if you want to copy the whole table with all of their attribute then you need to add * before from
i.e. *from

desc instructor;
alter table instructor modify (name varchar(40),position varchar(40));
desc instructor;
// if you want to change a varchar then you need to input eg:- "modify name varchar(40);"
// but if you have to change two or more then steps must be change to eg:-"modify (name
varchar(40),position varchar(40));"

Homework:
**Make a table with students details with name,roll,enroll,sec,branch,marks,phone no.,(put
10 inputs)**
**Then alter the values of char and practice those taught, (make two copy of table with
changes made at 1. Name enroll,marks and 2. Roll,phone no.**

DAY 2 (18/8/2022)

```
create table EMPLOYEE(eno
varchar(10),

ename varchar(20),
salary number(10),
age  number(3), dno
varchar(5));


create table DEPARTMENT(dno
varchar(10),

dname varchar(20),
dlocation number(10))


insert into EMPLOYEE values(01,'RAM',20000,32,101);insert
into  EMPLOYEE  values(02,'SAM',20500,30,103); insert  into
EMPLOYEE    values(03,'SITA',25000,28,101);   insert    into
EMPLOYEE    values(04,'GITA',20050,29,102);   insert    into
EMPLOYEE values(04,'MITA',29000,30,101);

select * from  EMPLOYE

alter table DEPARTMENT modify dlocation varchar(10);desc
DEPARTMENT;


insert into DEPARTMENT values(101,'RS','BLS');

insert into DEPARTMENT values(102,'ACCOUNT','BBSR');insert
into DEPARTMENT values(103,'HR','CTC');


select * from EMPLOYEE; select
* from  DEPARTMENT;


select eno,salary from EMPLOYEE;


select eno,salary from EMPLOYEE where salary>=25000;


select eno,salary from EMPLOYEE where salary>=20000 and eno>2;select

eno,salary from EMPLOYEE where salary>=20000 or eno>2; select  ename

from EMPLOYEE;
```

select distinct(ename) from EMPLOYEE;select

count(ename) from EMPLOYEE;

select count(distinct ename) from EMPLOYEE;select

* from EMPLOYEE order by eno asc;

select * from EMPLOYEE order by eno asc,ename desc;select *

from EMPLOYEE order by ename desc,eno asc;select * from

EMPLOYEE where age is null;

select * from EMPLOYEE where age is not null;select

* from EMPLOYEE order by eno asc;

update EMPLOYEE set ename='RAMESH' where eno=1;

Make table of student where the attributes will be enroll roll name branch sec marks there should be 6-7entries repetition of name

create table STUDENT(enrollmentno number(20),studentname varchar(30),rollno number (2), subject varchar(20));desc STUDENT;

create table Dept(dname varchar(20),year varchar(30));desc Dept;

insert into STUDENT values(1200,'Sam',1,'ENGLISH'); insert into STUDENT values(1201,'Sam',2,'BENGALI'); insert into STUDENT values(1202,'Deb',3,'HISTORY'); insert into STUDENT values(1203,'Soham',4,'CIVICS'); insert into STUDENT values(1204,'Ramu',5,'ECONOMICS');insert into STUDENT values(1204,'Debu',6,'FINANCE');

update STUDENT set enrollmentno=1205 where studentname='Debu';

```
alter table Dept add marks number(4);desc
Dept;

insert into Dept values('CSIT','4th',100);insert
into Dept values('CSIT','3rd',59); insert into
Dept values('CST','2nd',67); insert into Dept
values('CSE','1st',90);

insert into Dept values('CSE(AIML)','1st',98);insert
into Dept values('ECE','3rd',88);

select * from STUDENT;
select * from Dept;

select enrollmentno,subject from STUDENT;

select enrollmentno,subject from STUDENT where rollno >3;

select enrollmentno,subject from STUDENT where rollno >3 and enrollmentno >1202;select

enrollmentno,subject from STUDENT where rollno >4 or studentname='Debu'; select dname from

Dept;

select count(dname) from Dept;

select count(Distinct studentname) from STUDENT;select

* from STUDENT order by enrollmentno asc;

select * from STUDENT order by enrollmentno asc,studentname desc;select *

from STUDENT order by enrollmentno desc,studentname asc;select * from

STUDENT where rollno is null;

select * from STUDENT where rollno is not null; select *

from STUDENT  order by enrollmentno asc;
```

DAY 3 (25/08/2022)

```sql
create table EMPLOYEE(eno
varchar(10),

ename varchar(20),
salary number(10),
age  number(3), dno
varchar(5));

create table DEPARTMENT(dno
varchar(10),

dname varchar(20),
dlocation varchar(10));

insert into EMPLOYEE values(01,'RAM',20000,32,101);insert
into EMPLOYEE values(02,'SAM',20500,30,103); insert into
EMPLOYEE values(03,'SITA',25000,28,101); insert into
EMPLOYEE values(04,'GITA',20050,29,102); insert into
EMPLOYEE values(04,'MITA',29000,30,101);

insert into DEPARTMENT values(101,'RS','BLS');

insert into DEPARTMENT values(102,'ACCOUNT','BBSR');insert
into DEPARTMENT values(103,'HR','CTC');

select * from EMPLOYEE; select
* from DEPARTMENT;

select * from EMPLOYEE order by eno asc;

update EMPLOYEE set salary=50000 where dno=101;select *

from EMPLOYEE order by eno asc;

delete from EMPLOYEE where ename='SAM';select *

from EMPLOYEE order by eno asc;

delete  from EMPLOYEE;(WILL DELETE ALL RECORDS)
```

select * from EMPLOYEE;

select MIN(salary) from EMPLOYEE; select
MAX(salary) from EMPLOYEE;

select SUM(salary) from EMPLOYEE;

select AVG(salary) from EMPLOYEE;

select AVG(salary) from EMPLOYEE where dno=101;

select * from EMPLOYEE where ename like 'S%';(START WITH S)select * from

EMPLOYEE where ename like '%S';(END WITH S)

select * from EMPLOYEE where ename like '%or%';(any values that have "or" in any position)select * from

EMPLOYEE where ename like '_r%';(any values that have "r" in second position)

select * from EMPLOYEE where ename like 'a_%';(any values that start with "a" and have at least 2 in
length)

select * from EMPLOYEE where ename like 'a_%';(any values that stary with "a" and at least 3iin length)

select * from EMPLOYEE where ename like 'a%o';(any values that start with "a" and ends with "o")

ASSIGNMENT QUESTION for DAY 3
CREATE A STUDENT TABLE will will have rollno,name,phone no,marks,and department number and attendance percentage.Populate the table with at least 10 entries keeping in mind name can be common (marks ,attendance can be common)

Run all the queries we have learnt in this assignment

```
create table Student(
rollno varchar(10),
sname varchar(20),
phoneno varchar(10),
departno varchar(3),
attper varchar(5),
marks varchar(10));

insert into Student values(21,'RAMESH',10,3,87.5,100);
insert into Student values(18,'SARA',20,4,99.4,45);
insert into Student values(65,'SUBHRO',30,2,67.7,87);
insert into Student values(89,'VIJAY',40,1,67.7,98);
insert into Student values(24,'RAMU',50,2,99.4,65);
insert into Student values(29,'DHANUSH',60,4,60.5,70);
insert into Student values(65,'RAMU',70,1,54.8,68);
insert into Student values(2,'TANISHA',80,4,87.5,12);
insert into Student values(33,'DEBA',90,3,100.0,98);
insert into Student values(45,'ARNAB',100,2,99.9,99);


select * from  Student;

select * from Student order by departno asc;

update Student set attper=89.0 where rollno=21;

select * from Student order by departno asc;

delete from student where sname='RAMU';
```

```sql
select MIN(marks) from Student;

select MAX(marks) from Student;

select SUM(marks) from Student;

select AVG(marks) from Student;

select AVG(marks) from Student where rollno>40;

select * from STUDENT where sname like '%O';

select * from STUDENT where sname like '_U%';

select * from STUDENT where sname like 'S%A';
```

DAY 4(1/9/2022) CLASS ASSIGNMENT

```sql
create table EMPLOYEE(
eno varchar(10),
ename varchar(20),
salary number(10),
age  number(3),
dno varchar(5));

create table DEPARTMENT(
dno varchar(10),
dname varchar(20),
dlocation varchar(10));

insert into EMPLOYEE values(01,'RAM',20000,32,101);
insert into EMPLOYEE values(02,'SAM',20500,30,103);
insert into EMPLOYEE values(03,'SITA',25000,28,101);
insert into EMPLOYEE values(04,'GITA',20050,29,102);
insert into EMPLOYEE values(04,'MITA',29000,30,101);

insert into DEPARTMENT values(101,'RS','BLS');
insert into DEPARTMENT values(102,'ACCOUNT','BBSR');
insert into DEPARTMENT values(103,'HR','CTC');

select * from EMPLOYEE;
select * from  DEPARTMENT;

select * from EMPLOYEE where dno IN(101,105,110);

select * from EMPLOYEE where dno not IN(101,105,110);

select * from EMPLOYEE where age between 30 and 32;

select * from EMPLOYEE where age between 30 and 32 ORDER BY  ename
DESC;

select avg(salary) as SALARY_AVERAGE from EMPLOYEE where dno=101;
select dno as DNUMBER,avg(salary) as SALARY from EMPLOYEE group by
dno;
```

JOINING TABLE

```
create table DASSET(depno varchar(10) NOT NULL,manager varchar(10),
avalue varchar(10),primary key(depno));

drop table DEPARTMENT;

desc DEPARTMENT;

create table DEPARTMENT(
dno varchar(10) NOT NULL,
dname varchar(20),
dlocation varchar(10),
primary key(dno));

insert into DEPARTMENT values(101,'RS','BLS');
insert into DEPARTMENT values(102,'ACCOUNT','BBSR');
insert into DEPARTMENT values(103,'HR','CTC');

select * from  DEPARTMENT;

insert  into  DASSET  values  (101,1,502472);
insert  into  DASSET  values(102,3,6589784);
insert into DASSET values(103,5,57894568);

select * from  DASSET;

select
DEPARTMENT.dname,DEPARTMENT.dlocation,DASSET.avalue,DASSET.mana
ger from DEPARTMENT JOIN DASSET on DEPARTMENT.dno=DASSET.depno;

select distinct * from DEPARTMENT JOIN DASSET on
DEPARTMENT.dno=DASSET.depno;

insert into DEPARTMENT values(104,'HR1','KOL');
```

```sql
select * from DEPARTMENT join DASSET on
DEPARTMENT.dno=DASSET.depno;

select * from DEPARTMENT left join DASSET on
DEPARTMENT.dno=DASSET.depno;

insert into DASSET values(105,5,111111);

select * from DEPARTMENT right join DASSET on
DEPARTMENT.dno=DASSET.depno;

select * from DEPARTMENT full outer join DASSET on
DEPARTMENT.dno=DASSET.depno;
```

DAY 5(08/09/2022)

```
CREATE TABLE DEPARTMENT
( Dname VARCHAR(15) NOT NULL,
Dnumber INT NOT NULL,
Mgr_ssn CHAR(9) NOT NULL,
Mgr_start_date DATE,
PRIMARY KEY (Dnumber),
UNIQUE (Dname));

INSERT INTO DEPARTMENT(Dname,Dnumber,Mgr_ssn,Mgr_start_date)
VALUES('Reseach',5,'333445555','20-may-2015');

INSERT INTO DEPARTMENT(Dname,Dnumber,Mgr_ssn,Mgr_start_date)
VALUES('Adimin',4,'987654321','01-jan-2010');

INSERT INTO DEPARTMENT(Dname,Dnumber,Mgr_ssn,Mgr_start_date)
VALUES('HR',1,'888665555','10-JUNE-14');
SELECT * FROM DEPARTMENT;

CREATE TABLE EMPLOYEE
      ( Fname VARCHAR(15) NOT NULL,
      Minit CHAR,
      Lname VARCHAR(15) NOT NULL,
      Ssn CHAR(9) NOT NULL,
      Bdate DATE,
      Address VARCHAR(30),
      Sex CHAR,
      Salary DECIMAL(10,2),
      Super_ssn CHAR(9),
      Dno INT NOT NULL,
      PRIMARY KEY (Ssn),
      FOREIGN KEY (Dno) REFERENCES DEPARTMENT(Dnumber) );

INSERT INTO EMPLOYEE VALUES('John','B','Smith','123456789','15-oct-
2001','Balasore','M',30000,'333445555',5);
INSERT INTO EMPLOYEE VALUES('Franklin','T','Wrong','333445555','15-june-
1995','Bhadrak','M',40000,'888665555',5);
INSERT INTO EMPLOYEE VALUES('Ram','R','Smith','999887777','12-jan-
1998','Kolkata','F',25000,'987654321',4);
INSERT INTO EMPLOYEE VALUES('Ramesh','k','Kumar','987654321','15-Aug-
1996','Howrah','F',43000,'888665555',4);
INSERT INTO EMPLOYEE VALUES('Kailash','J','Singh','666884444','11-june-
1999','Durgapur','M',38000,'333445555',5);
INSERT INTO EMPLOYEE VALUES('Sanjay','R','Mishra','453453453','05-Mar-
2000','Siliguri','F',25000,'333445555',5);
INSERT INTO EMPLOYEE VALUES('Grish','C','Gupta','888665555','25-Nov-
2010','Rampur','F',55000,'null',1);

select * from employee;

ALTER TABLE DEPARTMENT add CONSTRAINT FK_DEPT
FOREIGN KEY(Mgr_ssn) REFERENCES EMPLOYEE(Ssn);

ALTER TABLE EMPLOYEE add CONSTRAINT FK_EMP1
 FOREIGN KEY(Super_ssn) REFERENCES EMPLOYEE(Ssn);
```

```sql
UPDATE  EMPLOYEE SET SUPER_SSN='333445555' WHERE SSN='888665555';

CREATE TABLE DEPT_LOCATIONS
( Dnumber INT NOT NULL,
Dlocation VARCHAR(15) NOT NULL,
PRIMARY KEY (Dnumber, Dlocation),
FOREIGN KEY (Dnumber) REFERENCES DEPARTMENT(Dnumber) );

INSERT INTO DEPT_LOCATIONS VALUES(1,'Balasore');
INSERT INTO DEPT_LOCATIONS VALUES(4,'Howrah');
INSERT INTO DEPT_LOCATIONs VALUES(5,'Siliguri');
INSERT INTO DEPT_LOCATIONs VALUES(5,'Bhadrak');
INSERT INTO DEPT_LOCATIONs VALUES(5,'Rampur');

Select * from DEPT_LOCATIONS;

CREATE TABLE PROJECT
( Pname VARCHAR(15) NOT NULL,
Pnumber INT NOT NULL,
Plocation VARCHAR(15),
Dnum INT NOT NULL,
PRIMARY KEY (Pnumber),
UNIQUE (Pname),
FOREIGN KEY (Dnum) REFERENCES DEPARTMENT(Dnumber) );

INSERT INTO PROJECT VALUES('PX',1,'Balasore',5);
INSERT INTO PROJECT VALUES('PY',2,'Bhadrak',5);
INSERT INTO PROJECT VALUES('PZ',3,'Durgapur',5);
INSERT INTO PROJECT VALUES('COM',10,'Siliguri',4);
INSERT INTO PROJECT VALUES('REC',202,'Bhadrak',1);
INSERT INTO PROJECT VALUES('NET',30,'siliguri',4);

Select * from project;

CREATE TABLE WORKS_ON
( Essn CHAR(9) NOT NULL,
Pno INT NOT NULL,
Hours DECIMAL(3,1) NOT NULL,
PRIMARY KEY (Essn, Pno),
FOREIGN KEY (Essn) REFERENCES EMPLOYEE(Ssn),
FOREIGN KEY (Pno) REFERENCES PROJECT(Pnumber) );

INSERT INTO WORKS_ON VALUES('123456789',1,30.2);
INSERT INTO WORKS_ON VALUES('123456789',2,7.2);
INSERT INTO WORKS_ON VALUES('666884444',3,10.2);
INSERT INTO WORKS_ON VALUES('666884444',1,20.2);
INSERT INTO WORKS_ON VALUES('666884444',10,15.2);
INSERT INTO WORKS_ON VALUES('333445555',202,30.2);
INSERT INTO WORKS_ON VALUES('333445555',30,1.2);
INSERT INTO WORKS_ON VALUES('987654321',2,25.2);
INSERT INTO WORKS_ON VALUES('987654321',1,50.2);
INSERT INTO WORKS_ON VALUES('987654321',3,5.2);
INSERT INTO WORKS_ON VALUES('987654321',10,30.2);
```

```sql
SELECT * FROM WORKS_ON;

CREATE TABLE DEPENDENT
( Essn CHAR(9) NOT NULL,
Dependent_name VARCHAR(15) NOT NULL,
Sex CHAR,
Bdate DATE,
Relationship VARCHAR(8),
PRIMARY KEY (Essn, Dependent_name),
FOREIGN KEY (Essn) REFERENCES EMPLOYEE(Ssn) );

INSERt INTO DEPENDENT VALUES('333445555','Sita','F','10-may-
2015','Daughter');
INSERt INTO DEPENDENT VALUES('333445555','Kranti','M','10-may-2015','Son');
INSERt INTO DEPENDENT VALUES('333445555','Kabita','F','10-may-
1965','mother');
INSERt INTO DEPENDENT VALUES('987654321','Sita','F','20-june-
2005','Wifer');
INSERt INTO DEPENDENT VALUES('123456789','SUraj','M','10-dec-2014','son');

select * from dependent;

SELECT Bdate, Address
FROM EMPLOYEE
WHERE Fname='John' AND Minit='B' AND Lname='Smith';

///////Query 1. Retrieve the name and address of all employees who work for
the   'Research' department./////



SELECT Fname, Lname, Address
FROM EMPLOYEE, DEPARTMENT
WHERE Dname='Research' AND Dnumber=Dno;

update department set Dname='research' where Dnumber=5;

///////////// Query 2. For every project located in 'siliguri',
 list the project number,
 the controlling department number, and the department manager's
last name, address, and birth date./////////



SELECT Pnumber, Dnum, Lname, Address, Bdate
FROM PROJECT, DEPARTMENT, EMPLOYEE
WHERE Dnum=Dnumber AND Mgr_ssn=Ssn AND
Plocation='Siliguri';
```