ASSIGNMENT 2

Q1)

```
CREATE TABLE Flights (
 fno INT PRIMARY KEY,
 from_city VARCHAR(50),
 to_city VARCHAR(50),
 distance DECIMAL(6,2),
 ticket_cost DECIMAL(10,2),
 cruising_range DECIMAL(6,2)
);

CREATE TABLE Aircraft (
 aid INT PRIMARY KEY,
 aname VARCHAR(50),
 cruising_range DECIMAL(6,2)
);

CREATE TABLE Employees (
 eid INT PRIMARY KEY,
 ename VARCHAR(50),
 salary DECIMAL(10,2)
);

CREATE TABLE Certified (
 eid INT,
 aid INT,
```

```
  PRIMARY KEY (eid, aid),
  FOREIGN KEY (eid) REFERENCES Employees(eid),
  FOREIGN KEY (aid) REFERENCES Aircraft(aid)
);

INSERT INTO Flights VALUES (1, 'Goa', 'Mumbai', 700, 7500, 4000);
INSERT INTO Flights VALUES (2, 'Goa', 'Chennai', 1000, 8000, 3000);
INSERT INTO Flights VALUES (3, 'Mumbai', 'Hyderabad', 1000, 9000, 2000);
INSERT INTO Flights VALUES (4, 'Mumbai', 'Pune', 900, 5000, 3000);
INSERT INTO Flights VALUES (5, 'Pune', 'Surat', 100, 1000, 4000);

INSERT INTO Aircraft VALUES (1, 'Boeing', 1000);
INSERT INTO Aircraft VALUES (2, 'Airbus', 2100);
INSERT INTO Aircraft VALUES (3, 'Embraer', 5000);
INSERT INTO Aircraft VALUES (4, 'Boeing2', 7000);
INSERT INTO Aircraft VALUES (5, 'Airbus2', 2000);

INSERT INTO Employees VALUES (1, 'Ashraf', 100000);
INSERT INTO Employees VALUES (2, 'Prerna', 120000);
INSERT INTO Employees VALUES (3, 'MRP', 90000);
INSERT INTO Employees VALUES (4, 'MRF', 110000);
INSERT INTO Employees VALUES (5, 'DMV', 95000);

INSERT INTO Certified VALUES (1,2);
INSERT INTO Certified VALUES (2,3);
INSERT INTO Certified VALUES (3,5);
INSERT INTO Certified VALUES (4,2);
INSERT INTO Certified VALUES (5,1);
```

select * from Certified;

EID	AID
1	2
2	3
3	5
4	2
5	1

SELECT A.aid, A.aname

FROM Certified C

JOIN Aircraft A ON C.aid = A.aid

JOIN Flights F ON A.cruising_range >= F.cruising_range

WHERE F.from_city = 'Goa' AND F.to_city = 'Mumbai';

AID	ANAME
3	Embraer

SELECT F.fno, F.from_city, F.to_city, F.distance, F.ticket_cost

FROM Flights F

JOIN Certified C ON F.cruising_range >= (

SELECT A.cruising_range

```
 FROM Aircraft A
 WHERE A.aid = C.aid AND A.cruising_range > 2000
);
```

FNO	FROM_CITY	TO_CITY	DISTANCE	TICKET_COST
1	Goa	Mumbai	700	7500
1	Goa	Mumbai	700	7500
2	Goa	Chennai	1000	8000
2	Goa	Chennai	1000	8000
4	Mumbai	Pune	900	5000
4	Mumbai	Pune	900	5000
5	Pune	Surat	100	1000
5	Pune	Surat	100	1000

Q2)

```
create table class(
   class int primary key,
   description varchar2(255)
);

insert into class values(1300, 'MBA');
insert into class values(1301, 'MSc');
insert into class values(1302, 'MCA');

create table student(
   sno int primary key,
   name varchar(255),
   class int references class(class)
);

insert into student values(1, 'Ashraf', 1300);
insert into student values(2, 'Prerna', 1302);
insert into student values(5, 'MRP', 1301);


create table lab(
   lno int ,
   machine_no int ,
   primary key(lno, machine_no),
   floor int
);
```

```
desc lab;

alter table lab modify floor varchar2(255);
desc lab;

insert into lab values(1, 1, 1);
insert into lab values(1, 2, 1);
insert into lab values(2, 1, 2);
insert into lab values(2, 2, 2);

create table allotments(
   sno int references student(sno),
   lno int,
   machine_no int,
   primary key (sno, machine_no, lno),
   foreign key (lno, machine_no) references lab(lno, machine_no),
   dayofweek varchar(255)
);
insert into allotments values(1, 1, 1, 'Monday');
insert into allotments values(2, 1, 2, 'Tuesday');
insert into allotments values(5, 2, 1, 'Wednesday');
select * from student s join class c on s.class = c.class where c.description = 'MCA';
```

SNO	NAME	CLASS	CLASS	DESCRIPTION
2	Prerna	1302	1302	MCA

`