EXPERIMENT – 3: AIRLINE DATABASE

Consider the schema for airline flight information Database:

FLIGHTS (no: integer, fromPlace: string, toPlace: string, distance: integer, Departs: date, arrives: date, price: real)

AIRCRAFT (aid: integer, aname: string, cruisingrange: integer)

CERTIFIED (eid: integer, aid: integer)

EMPLOYEES (eid: integer, ename: string, salary: integer)

Create tables and populate with appropriate values(At least 5 records in each table) for the given database.

Write SQL queries to

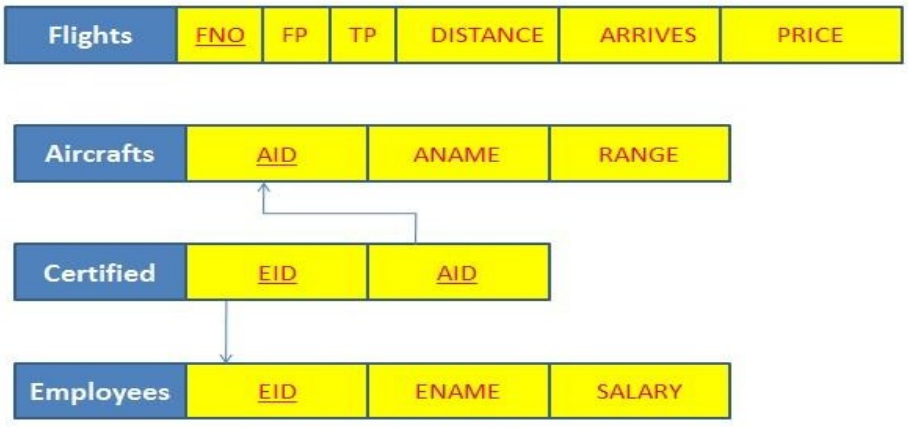
1. Find the names of aircraft such that all pilots certified to operate them have salaries more than Rs.80,000.

2. For each pilot who is certified for more than three aircrafts, find the eid, ename and the maximum cruising range of the aircraft for which she or he is certified.

3. Find the names of pilots whose salary is less than the price of the cheapest route from Bengaluru to Frankfurt.

4. Find the aids of all aircraft that can be used on routes from Bengaluru to New Delhi

SCHEMA DIAGRAM



CREATE TABLE STATEMENTS:

```
CREATE TABLE FLIGHTS
 (no integer,
fromPlace varchar(20),
toPlace varchar(20),
distance integer,
departs date,
arrives date,
price real,
 PRIMARY KEY (no));
```

```
CREATE TABLE AIRCRAFT
(aid integer,
 aname varchar (15),
cruisingrange integer,
PRIMARY KEY (aid));
```

```
CREATE TABLE EMPLOYEES
 (eid integer,
 ename varchar (15),
salary integer,
PRIMARY KEY (eid));
```

SQL)**SELECT * FROM FLIGHTS;**

NO	FROMPLACE	TOPLACE	DISTANCE	DEPARTS	ARRIVES	PRICE
255	bangalore	frankfurt	200	01-AUG-11	01-AUG-11	5000
256	bangalore	frankfurt	200	01-AUG-11	01-AUG-11	8000
257	bangalore	delhi	200	01-AUG-11	01-AUG-11	5000
258	bangalore	delhi	200	01-AUG-11	01-AUG-11	6000
259	bangalore	mangalore	200	01-AUG-11	01-AUG-11	8000

SQL> **SELECT * FROM AIRCRAFT;**

AID	ANAME	GRANGE
685	boeing15	1000
686	boeing10	2000
687	skytrain	1000
688	avenger	100

SQL> **SELECT * FROM EMPLOYEES;**

EID	ENAME	SALARY
101	asha	90000
102	arun	85000
103	anand	3000
104	ramya	4000

SQL> **SELECT * FROM CERTIFIED;**

EID	AID
101	685
101	686
101	687
101	688
102	685
103	686
103	687

QUERIES:

1). Find the names of aircraft such that all pilots certified to operate them have salaries more than Rs.80,000.

SELECT DISTINCT A. aname

FROM AIRCRAFT A, CERTIFIED C, EMPLOYEE E

```
WHERE  A.aid = C.aid  AND  C.eid =E.eid AND E. salary>80000;
```

2). For each pilot who is certified for more than three aircrafts, find the eid and the maximum range of the aircraft for which she or he is certified.

```
SELECT C.eid, MAX (A. cruisingrange) FROM      CERTIFIED  C,
AIRCRAFT A
WHERE C.aid =    A.aid
GROUP BY  C.eid HAVING      COUNT (*) > 3;
```

3). Find the names of pilots whose salary is less than the price of the cheapest route from Bengaluru to Frankfurt.

```
SELECT E. ename FROM EMPLOYEES  E
      WHERE  E. salary<  (SELECT min(price)FROM FLIGHTS
            WHERE  fromPlace = 'bangalore'  AND toPlace = 'frankfurt');
```

4)Find the aids of all aircraft that can be used on routes from

Bengaluru to New Delhi.

```
SELECT    A.aid
FROM  AIRCRAFT A

WHERE   A. cruisingrange> (SELECT min(distance)

                  FROM FLIGHTS

              WHERE  fromPlace='bangalore'   AND    toPlace = 'delhi');
```