PROGRAM 5. AIRLINE FLIGHT DATABASE

FLIGHTS (flno: integer, from: string, to: string, distance: integer, departs: time, arrives: time, price: integer)

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

CERTIFIED (eid: integer, aid: integer)

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

Note that the Employees relation describes pilots and other kinds of employees as well; Every pilot is certified

for some aircraft, and only pilots are certified to fly.

Write each of the following queries in SQL.

```
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0000 seconds.)
 use Airline flight
[ Edit inline ] [ Edit ] [ Create PHP code ]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.2090 seconds.)
 create table flights(flno int primary key , from varchar(30) , to varchar(30) , distance int , departs datetime, arrives datetime ,
 price int)
[Edit inline] [Edit] [Create PHP code]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.2330 seconds.)
 create table aircraft(aid int primary key , aname varchar(30) , cruisingrange int)
[Edit inline][Edit][Create PHP code]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.1820 seconds.)
 create table employee(eid int primary key , ename varchar(30) , salary int)
[ Edit inline ] [ Edit ] [ Create PHP code ]
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.2670 seconds.)
 create table certified(eid int, aid int , primary key(eid , aid) , foreign key(eid) references employee(eid)on UPDATE CASCADE on DELETE
 CASCADE , foreign key(aid) references aircraft(aid)on UPDATE CASCADE on DELETE CASCADE)
[ Edit inline ] [ Edit ] [ Create PHP code ]
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	Table _	A	Action								0	Туре	Collation	Size	Overhead
		1	7	Browse	M Structure	Search	3- € Insert	m Empty	Drop		8	InnoDB	utf8mb4_general_ci	32.0 KiB	-
	enrolled	8	7	Browse	M Structure	Search	}≟ Insert	Empty	Drop		10	InnoDB	utf8mb4_general_ci	48.0 KiB	-
	faculty	8	7	Browse	M Structure	Search	≩≟ Insert	Empty	Drop		5	InnoDB	utf8mb4_general_ci	16.0 KiB	17/
	student	1	7	Browse	M Structure	Search	3-i Insert	⊞ Empty	Drop		6	InnoDB	utf8mb4_general_ci	16.0 KiB	-
	4 tables	Sı	ım								29	InnoDB	utf8mb4_general_ci	112.0 KiB	0 B

```
1 row inserted. (Query took 0.0580 seconds.)
 insert into flights values(101, 'Bangalore', 'Mumbai', 2500, '2021-05-13 07:15:31', '2021-05-13 17:15:31', 5000)
[ Edit inline ] [ Edit ] [ Create PHP code ]
 1 row inserted. (Query took 0.1370 seconds.)
 insert into flights values(102, 'Bangalore', 'Lucknow', 3000, '2021-05-13 07:15:31', '2021-05-13 11:15:31', 6000)
[Edit inline] [Edit] [Create PHP code]
 1 row inserted. (Query took 0.0560 seconds.)
 insert into flights values(103, 'Lucknow', 'Mumbai',500, '2021-05-13 12:15:31', '2021-05-13 17:15:31',3000)
[ Edit inline ] [ Edit ] [ Create PHP code ]
 1 row inserted. (Query took 0.0420 seconds.)
 insert into flights values(107, 'Bangalore', 'Frankfurt', 8000, '2021-05-13 07:15:31', '2021-05-13 22:15:31', 60000)
[Edit inline] [Edit] [Create PHP code]
 1 row inserted. (Query took 0.1690 seconds.)
 insert into flights values(104, 'Bangalore', 'Frankfurt', 8500, '2021-05-13 07:15:31', '2021-05-13 23:15:31',75000)
[ Edit inline ] [ Edit ] [ Create PHP code ]
 1 row inserted. (Query took 0.0520 seconds.)
 insert into flights values(105, 'Kolkata', 'Mumbai', 3400, '2021-05-13 07:15:31', '2021-05-13 09:15:31', 7000)
[ Edit inline ] [ Edit ] [ Create PHP code ]
```



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√ 1 row inserted. (Query took 0.0610 seconds.)

 insert into aircraft values(101 , 'Airbus' , 3000)
[ Edit inline ] [ Edit ] [ Create PHP code ]
 1 row inserted. (Query took 0.1120 seconds.)
 insert into aircraft values(102, 'Boeing',900)
[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ 1 row inserted. (Query took 0.0350 seconds.)
 insert into aircraft values(103, 'Dassault', 800)
[ Edit inline ] [ Edit ] [ Create PHP code ]
 1 row inserted. (Query took 0.0410 seconds.)
 insert into aircraft values(104, 'Dreamliner', 10000)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0400 seconds.)

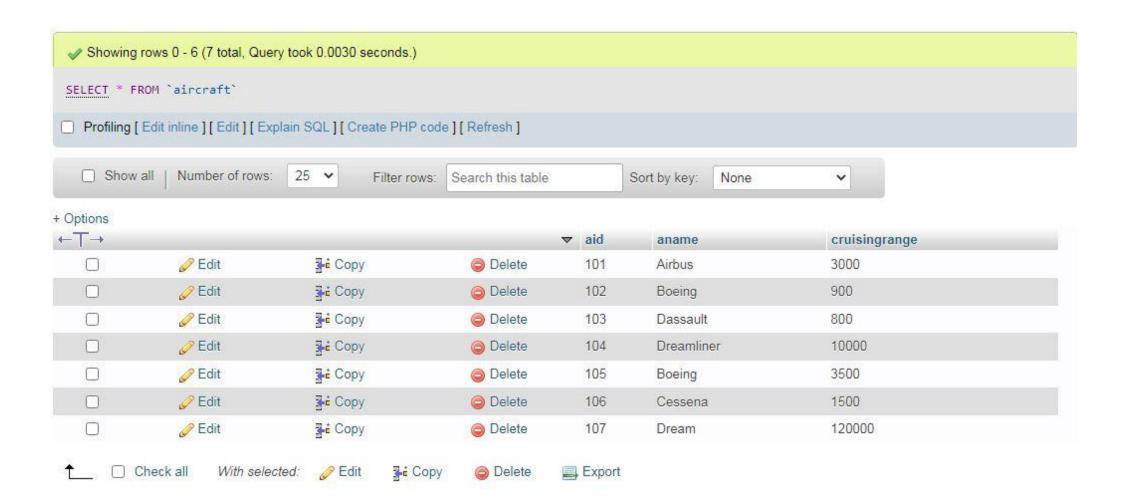
 insert into aircraft values(105, 'Boeing', 3500)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0360 seconds.)

 insert into aircraft values(106, 'Cessena', 1500)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.1120 seconds.)

 insert into aircraft values(107, 'Dream', 120000)
[ Edit inline ] [ Edit ] [ Create PHP code ]
```



```
√ 1 row inserted. (Query took 0.0570 seconds.)

 insert into employee values(701, 'Arvind',50000)
[ Edit inline ] [ Edit ] [ Create PHP code ]
  1 row inserted. (Query took 0.1590 seconds.)
 insert into employee values(702, 'Bali', 100000)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0490 seconds.)

 insert into employee values(703, 'Chutki', 150000)
[Edit inline][Edit][Create PHP code]
  1 row inserted. (Query took 0.0310 seconds.)
 insert into employee values(704, 'Drake', 90000)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0290 seconds.)

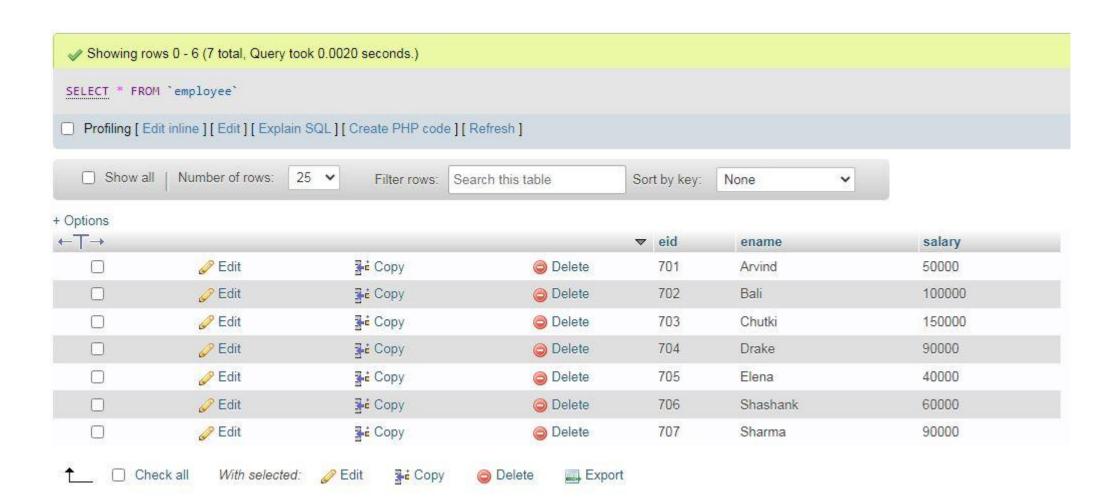
 insert into employee values(705, 'Elena', 40000)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0310 seconds.)

 insert into employee values(706, 'Shashank',60000)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0290 seconds.)

 insert into employee values(707, 'Sharma', 90000)
[ Edit inline ] [ Edit ] [ Create PHP code ]
```



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√ 1 row inserted. (Query took 0.0750 seconds.)

 insert into certified values(702,101)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0700 seconds.)
 insert into certified values(703,105)
[Edit inline][Edit][Create PHP code]

√ 1 row inserted. (Query took 0.0320 seconds.)

 insert into certified values(704,105)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0530 seconds.)

 insert into certified values(705,103)
[Edit inline][Edit][Create PHP code]

√ 1 row inserted. (Query took 0.0410 seconds.)

 insert into certified values(701,102)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0310 seconds.)

 insert into certified values(703,104)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.1870 seconds.)

 insert into certified values(701,101)
[Edit inline][Edit][Create PHP code]
```

```
√ 1 row inserted. (Query took 0.0380 seconds.)

 insert into certified values(704,104)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0340 seconds.)
 insert into certified values(702,107)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0330 seconds.)

 insert into certified values(703,107)
[Edit inline][Edit][Create PHP code]

√ 1 row inserted. (Query took 0.0550 seconds.)
 insert into certified values (704, 107)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0570 seconds.)

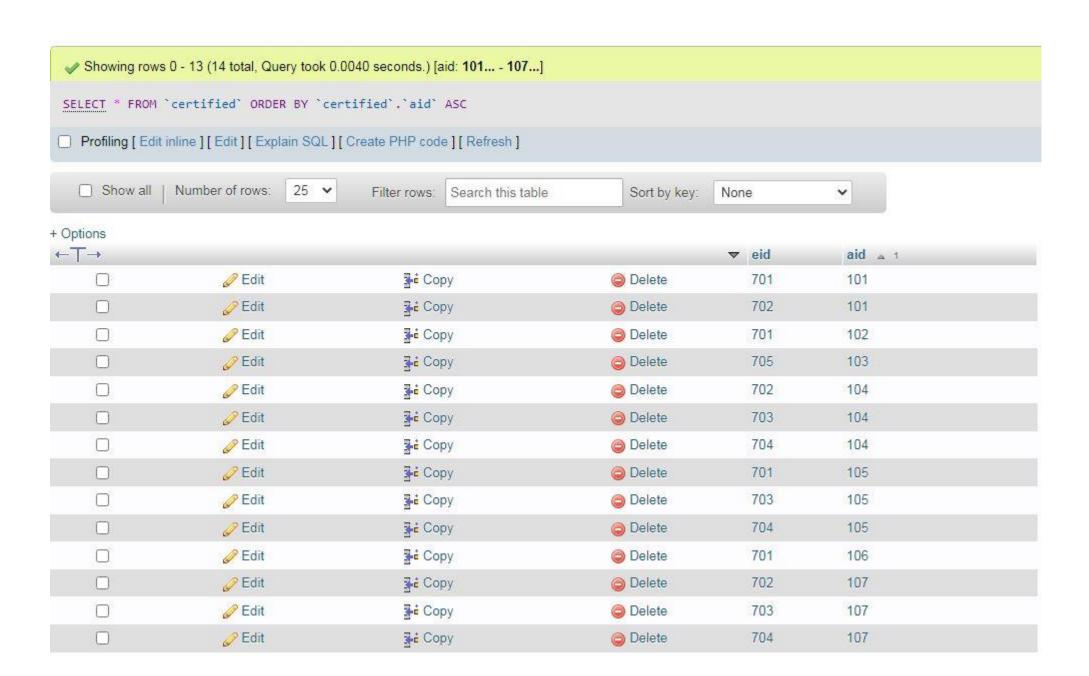
 insert into certified values(701,106)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0260 seconds.)

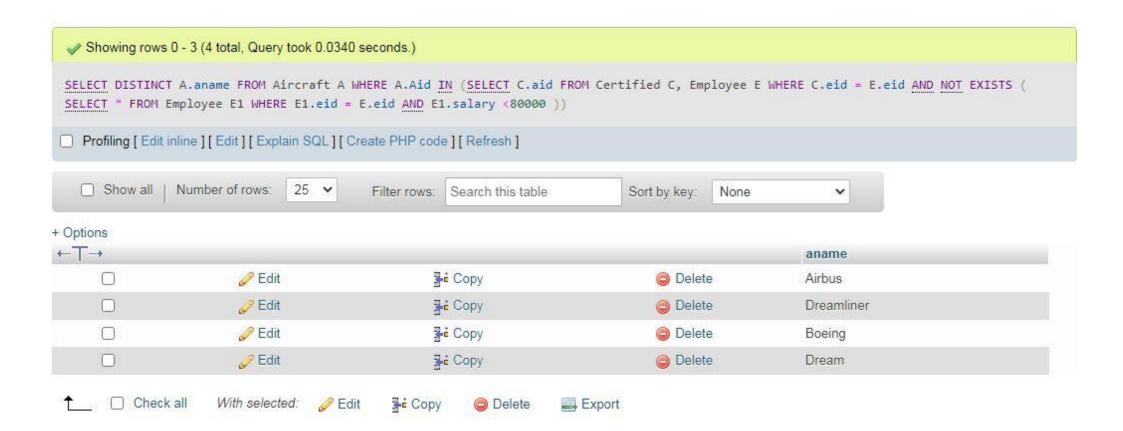
 insert into certified values (701,105)
[ Edit inline ] [ Edit ] [ Create PHP code ]

√ 1 row inserted. (Query took 0.0300 seconds.)

 insert into certified values (702, 104)
[ Edit inline ] [ Edit ] [ Create PHP code ]
```



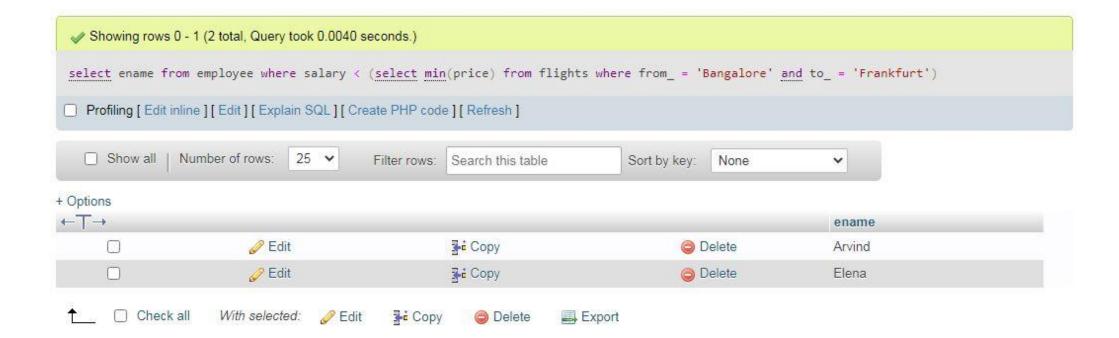
i. Find the names of aircraft such that all pilots certified to operate them have salaries more than Rs.80,000.



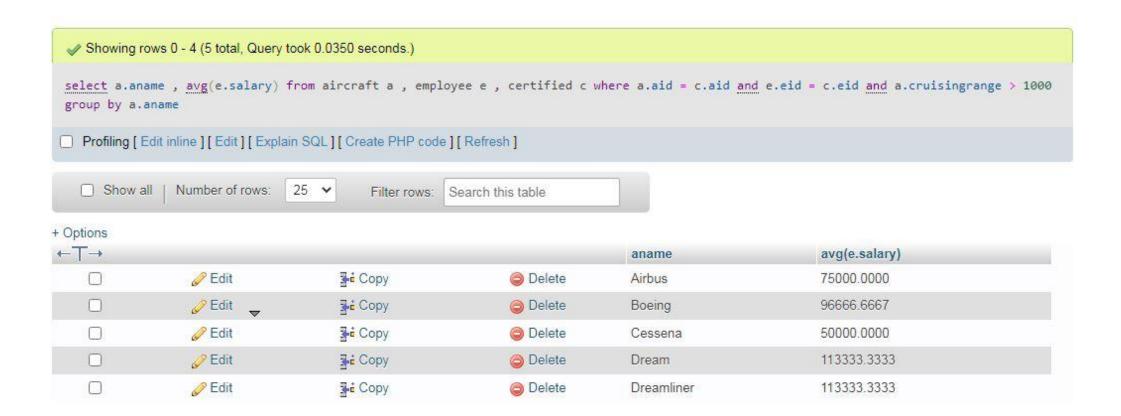
ii. For each pilot who is certified for more than three aircrafts, find the eid and the maximum cruising range of the aircraft for which she or he is certified.



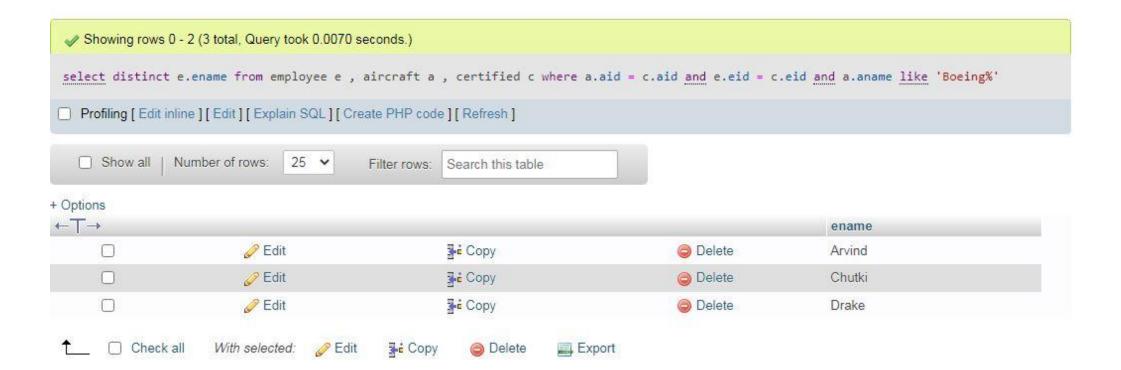
iii. Find the names of pilots whose salary is less than the price of the cheapest route from Bengaluru to Frankfurt.



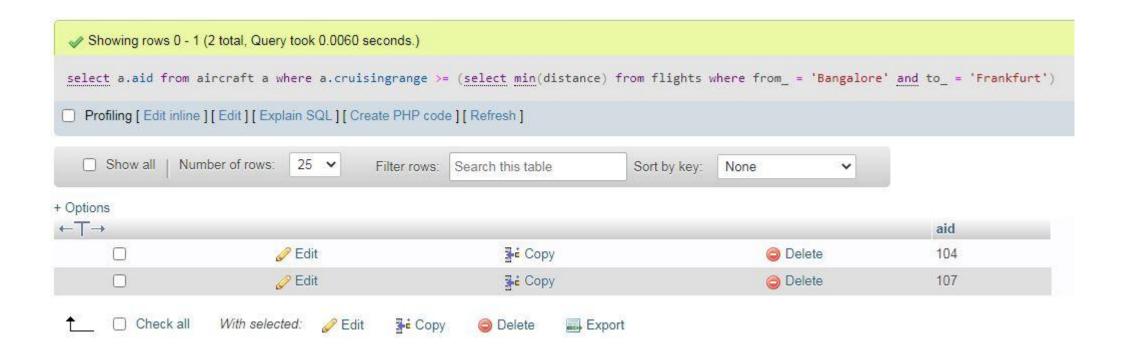
iv. For all aircraft with cruising range over 1000 Kms, find the name of the aircraft and the average salary of all pilots certified for this aircraft.



v. Find the names of pilots certified for some Boeing aircraft.



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



vii. A customer wants to travel from Madison to New York with no more than two changes of flight. List the choice of departure times from Madison if the customer wants to arrive in New York by 6 p.m.

(Bengaluru-Mumbai used as city)



viii. Print the name and salary of every non-pilot whose salary is more than the average salary for pilots.

