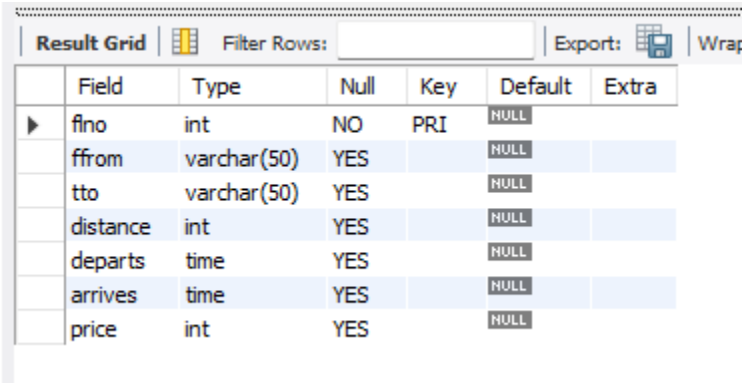


WEEK 8

AIRLINE DATABASE

```
create database Airline;  
use Airline;
```

```
create table flights(  
  flno int,  
  ffrom varchar(50),  
  tto varchar(50),  
  distance int,  
  departs time,  
  arrives time,  
  price int,  
  primary key(flno)  
);  
desc flights;
```



	Field	Type	Null	Key	Default	Extra
►	flno	int	NO	PRI	NULL	
	ffrom	varchar(50)	YES		NULL	
	tto	varchar(50)	YES		NULL	
	distance	int	YES		NULL	
	departs	time	YES		NULL	
	arrives	time	YES		NULL	
	price	int	YES		NULL	

```
create table aircraft(  
  aid int,  
  aname varchar(50),  
  cruisingrange int,  
  primary key(aid)  
);  
desc aircraft;
```

Result Grid						
		Filter Rows:			Export:	Wrap Cel
	Field	Type	Null	Key	Default	Extra
▶	aid	int	NO	PRI	NULL	
	aname	varchar(50)	YES		NULL	
	cruisingrange	int	YES		NULL	

```
create table employee(
eid int,
ename varchar(50),
salary int,
primary key(eid)
);
desc employee;
```

Result Grid						
		Filter Rows:			Export:	Wra
	Field	Type	Null	Key	Default	Extra
▶	eid	int	NO	PRI	NULL	
	ename	varchar(50)	YES		NULL	
	salary	int	YES		NULL	

```
create table certified(
eid int,
aid int,
foreign key(aid) references aircraft(aid)
on update cascade on delete cascade,
foreign key(eid) references employee(eid)
on update cascade on delete cascade);
desc certified;
```

Result Grid						
		Filter Rows:			Export:	V
	Field	Type	Null	Key	Default	Extra
▶	eid	int	YES	MUL	NULL	
	aid	int	YES	MUL	NULL	

```

insert into employee values(101,'Avinash',50000);
insert into employee values(102,'Lokesh',60000);
insert into employee values(103,'Rakesh',70000);
insert into employee values(104,'Santhosh',82000);
insert into employee values(105,'Tilak',5000);
select * from employee;

```

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Result Grid			
	eid	ename	salary
▶	101	Avinash	50000
	102	Lokesh	60000
	103	Rakesh	70000
	104	Santhosh	82000
	105	Tilak	5000
✱	NULL	NULL	NULL

```

insert into aircraft values(1,'Airbus',2000);
insert into aircraft values(2,'Boeing',700);
insert into aircraft values(3,'JetAirways',550);
insert into aircraft values(4,'Indigo',5000);
insert into aircraft values(5,'Boeing',4500);
insert into aircraft values(6,'Airbus',2200);
select * from aircraft;

```

Result Grid			
	aid	aname	cruisingrange
▶	1	Airbus	2000
	2	Boeing	700
	3	JetAirways	550
	4	Indigo	5000
	5	Boeing	4500
	6	Airbus	2200
✱	NULL	NULL	NULL

```

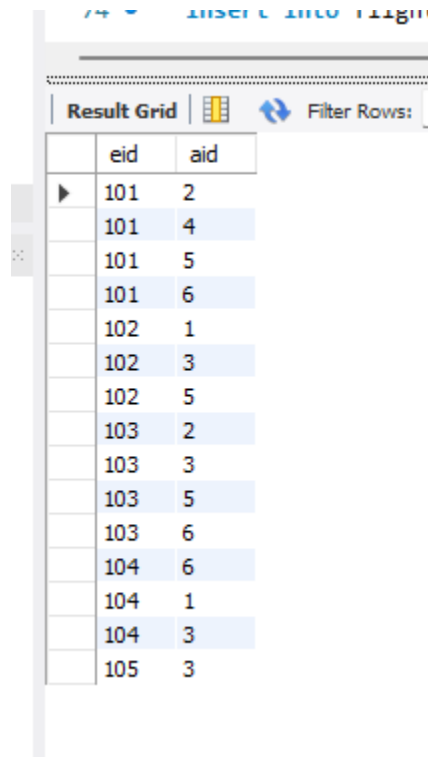
insert into certified values(101,2);
insert into certified values(101,4);
insert into certified values(101,5);
insert into certified values(101,6);
insert into certified values(102,1);

```

```

insert into certified values(102,3);
insert into certified values(102,5);
insert into certified values(103,2);
insert into certified values(103,3);
insert into certified values(103,5);
insert into certified values(103,6);
insert into certified values(104,6);
insert into certified values(104,1);
insert into certified values(104,3);
insert into certified values(105,3);
select * from certified;

```



The screenshot shows a database query result grid for the 'certified' table. The grid has two columns: 'eid' and 'aid'. The data is as follows:

eid	aid
101	2
101	4
101	5
101	6
102	1
102	3
102	5
103	2
103	3
103	5
103	6
104	6
104	1
104	3
105	3

```

insert into flights values(1,'Banglore','New Delhi',500,'6:00','9:00',5000);
insert into flights values(2,'Banglore','Chennai',300,'7:00','8:30',3000);
insert into flights values(3,'Trivandrum','New Delhi',800,'8:00','11:30',6000);
insert into flights values(4,'Banglore','Frankfurt',10000,'6:00','23:30',50000);
insert into flights values(5,'Kolkata','New Delhi',2400,'11:00','3:30',9000);
insert into flights values(6,'Banglore','Frankfurt',8000,'9:00','23:00',40000);
select * from flights;

```

Result Grid							
Filter Rows:				Edit:		Export/Imp	
	fno	ffrom	tto	distance	departs	arrives	price
▶	1	Banglore	New Delhi	500	06:00:00	09:00:00	5000
	2	Banglore	Chennai	300	07:00:00	08:30:00	3000
	3	Trivandrum	New Delhi	800	08:00:00	11:30:00	6000
	4	Banglore	Frankfurt	10000	06:00:00	23:30:00	50000
	5	Kolkata	New Delhi	2400	11:00:00	03:30:00	9000
	6	Banglore	Frankfurt	8000	09:00:00	23:00:00	40000
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

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

```
select a.aname from aircraft a
      where a.aid in(select c.aid from certified c
                    where c.eid in(select e.eid from employee e where salary>80000));
```

Result Grid	
	aname
▶	Airbus
	JetAirways
	Airbus



ii. For each pilot who is certified for more than three aircrafts, find the eid and the maximum cruisingrange 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;
```

Result Grid		
	eid	max(a.cruisingrange)
▶	102	4500
	104	2200
	101	5000
	103	4500

```
select e.ename from employee e
       where e.salary<(select min(f.price) from flights f
                        where f.ffrom='Bangalore' and f.tto='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.

Result Grid   **Filter Rows:**

	aname	avg(e.salary)
▶	Airbus	71000.0000
	Indigo	50000.0000
	Boeing	60000.0000
	Airbus	67333.3333

[illegible]

Result Grid		Filter Rows
	ename	
▶	Avinash	
	Lokesh	
	Rakesh	

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

select a.aid from aircraft a

where cruisingrange >(select distance from flights where ffrom='Banglore' And
tto='New Delhi');

Result Grid		Filter Rows
	aid	
▶	1	
	2	
	3	
	4	
	5	
	6	
✱	NULL	