# Coding challenge-3

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1. Select all open incidents

Answer:

select \* from Crime where status="Open";

CrimeID   IncidentType	IncidentDate	Location	Description	   Status
1   Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open    +

2. Find the total number of incidents.

Answer:

select count(CrimeID) as total\_incidents from Crime;

3. List all unique incident types

**Answer** 

select distinct(IncidentType) from Crime;

4. Retrieve incidents that occurred between '2023-09-01' and '2023-09-10'

Select \* from Crime where IncidentDate between '2023-09-01' and '2023-09-10';

5. List persons involved in incidents in descending order of age.

**Answer** 

**Answer** 

select name, age from Victim order by age desc;

6. Find the average age of persons involved in incidents.

**Answer** 

select avg(age) as avg\_age from victim;

```
mysql> select avg(age) as avg_age from victim;
+----+
| avg_age |
+----+
| 35.6667 |
+----+
1 row in set (0.00 sec)
```

7. List incident types and their counts, only for open cases.

# Answer

select incidenttype,count(\*) as incident\_count from crime where status="open" group by incidenttype;

8. Find persons with names containing 'Doe'.

#### Answer

select name from victim where name like '%doe%';

9. Retrieve the names of persons involved in open cases and closed cases.

### Answer

select name, status from victim v join crime c on v.crimeID=c.crimeID where status="open" or status="closed";

10. List incident types where there are persons aged 30 or 35 involved.

### Answer

select incidenttype, age from crime c join victim v on v.crimeID=c.crimeID where age=30 or age=35;

```
mysql> select incidenttype, age from crime c join victim v on v.crimeID=c.crimeID where age=30 or age=35;
+------+
| incidenttype | age |
+-----+
| Robbery | 30 |
| Theft | 35 |
+-----+
2 rows in set (0.00 sec)
```

11. Find persons involved in incidents of the same type as 'Robbery'.

# **Answer**

select v.name as victimname,s.name as suspectname, incidenttype from crime c join victim v on c.crimeID=v.crimeID join suspect s on s.crimeid=c.crimeid where incidenttype="robbery";

12. List incident types with more than one open case.

# **Answer**

select incidenttype, count(\*) from crime where status="open" group by incidenttype having count(\*)>1;

13. List all incidents with suspects whose names also appear as victims in other incidents.

# Answer

select c.\* from crime c join suspect s on c.crimeID=s.crimeID join victim v on v.name=s.name and v.crimeID <> s.crimeID;

mysql> sele	ect c.* from cr	ime c join suspe	ect s on c.crimeID=s.crime	eID join victim v on v.name=s.name and v	v.crimeID	<> s.crimeID;
CrimeID	IncidentType	IncidentDate	Location	Description	Status	
1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open	
1 row in se	et (0.00 sec)				TT	

14. Retrieve all incidents along with victim and suspect details.

# Answer

select incidenttype,v.\*,s.\* from crime c join suspect s on c.crimeID=s.crimeID join victim v on v.crimeID=c.crimeID;

incidenttype	VictimID	CrimeID	Name	ContactInfo	Injuries	age	SuspectID	CrimeID	Name	Description	CriminalHistory	age
Robbery	1	1	John Doe	johndoe@example.com	Minor injuries	30	1	1	Robber 1	Armed and masked robber	Previous robbery convictions	30
Homicide	2				Deceased	42	2	2	Unknown	Investigation ongoing	NULL	33
Theft	3	3	Alice Johnson	alicejohnson@example.com	None	35	3	3	Suspect 1	Shoplifting suspect	Prior shoplifting arrests	29

15. Find incidents where the suspect is older than any victim.

# Answer

select c.\* from crime c join suspect s on c.crimeid=s.suspectid join victim v on v.crimeid=c.crimeid where v.age>(select max(age) from suspect);

mysql> select c.* from crime c join suspect s on c.crimeid=s.suspectid join victim v on v.crimeid=c.crimeid where v.age>(select max(age) from suspect);							
CrimeID   IncidentType	IncidentDate	Location	Description	Status	Ī		
2   Homicide   Tnvestigation	2023-09-20	456 Elm St, Townsville	Investigation into a murder case	Under	•		
	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed	!		
2 rows in set (0.00 sec)					,		

16. Find suspects involved in multiple incidents:

#### **Answer**

select name,count(suspectID) from suspect group by name having count(suspectID)>1;

17. List incidents with no suspects involved.

# **Answer**

select c.\* from crime c join suspect s on c.crimeID=s.crimeID where s.name="unknown";

18. List all cases where at least one incident is of type 'Homicide' and all other incidents are of type 'Robbery'

#### **Answer**

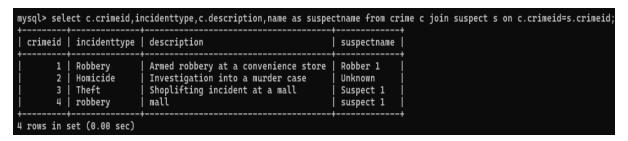
select \* from crime where incidenttype="homicide" or incidenttype="robbery";

```
mysql> select * from crime where incidenttype="homicide" or incidenttype="robbery";
| CrimeID | IncidentType | IncidentDate | Location | Description | Status |
| 1 | Robbery | 2023-09-15 | 123 Main St, Cityville | Armed robbery at a convenience store | Open |
| 2 | Homicide | 2023-09-20 | 456 Elm St, Townsville | Investigation into a murder case | Under |
| 4 | robbery | 2023-09-11 | 124 acb street | mall | open |
| 3 rows in set (0.00 sec)
```

19. Retrieve a list of all incidents and the associated suspects, showing suspects for each incident, or 'No Suspect' if there are none.

# Answer:

select c.crimeid,incidenttype,c.description,name as suspectname from crime c join suspect s on c.crimeid=s.crimeid;



20. List all suspects who have been involved in incidents with incident types 'Robbery' or 'Assault'

### Answer

select suspectid,s.crimeid,name as suspectname, incidenttype from suspect s join crime c on c.crimeid=s.crimeid where incidenttype="robbery" or incidenttype="assault";

