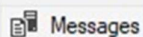# Coding Challenge : 1 – Crime Management Database

1. Select all open Incidentsv

```
--1. Select all open incidents--
select * from Crime where status = 'open';
```

182 % ▼ ◁

⊞ Results   📄 Messages

	CrimeID	Incident Type	Incident Date	Location	Description	Status
1	1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open

2. Total Number of Incidents

```
--2.. Find the total number of incidents
select COUNT(*) as Total_Number_of_Incidents from Crime;
```

150 %

Results   Messages

	Total_Number_of_Incidents
1	3

3. List all Unique Incident Types

```
--3. List all unique incident types
SELECT DISTINCT IncidentType FROM Crime;
```

150 %

Results   Messages

	IncidentType
1	Homicide
2	Robbery
3	Theft

4. Incidents occurred between '2023-09'01 – '2023-09-10'

```
--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'
```

150 %

Results | Messages

	CrimeID	Incident Type	IncidentDate	Location	Description	Status
1	3	Theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed

5. Persons involved in Incidents in Descending Order of Age

```
--5.List persons involved in incidents in descending order of age.--
select name, age from Victim union select name, age from Suspect order by age desc;
```

150 %

Results | Messages

	name	age
1	Jane Smith	45
2	Robber 1	40
3	Unknown	35
4	John Doe	30
5	Suspect 1	28
6	Alice Johnson	25

6. Average Age of Persons Involved in Incidents

```
--6. Find the average age of persons involved in incidents.
select avg(age) as Average_Age from( select age from Victim union all select age from Suspect )
as People_Involved;
```

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Results | Messages

	Average_Age
1	33

7. List of Incident types and their counts for open cases only

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

select IncidentType, COUNT(*) as Incidents from Crime where status = 'open' group by IncidentType;
```

150 %

Results | Messages

	IncidentType	Incidents
1	Robbery	1

8. Persons with name DOE

```sql
--8.Find persons with names containing 'Doe'

select Name from Victim where Name like '%Doe%' union select Name from Suspect where Name like '%Doe%'
```

150 %

Results | Messages

	Name
1	John Doe

9. Persons involved in Open Case and Close Case

```sql
--9.Retrieve the names of persons involved in open cases and closed cases.
select v.Name as Victim_Name, s.Name as Suspect_Name from Crime c
left join Victim v on c.CrimeID = v.CrimeID
left join Suspect s on c.CrimeID = s.CrimeID
where c.Status In('open', 'closed');
```

150 %

Results | Messages

	Victim_Name	Suspect_Name
1	John Doe	Robber 1
2	Alice Johnson	Suspect 1

10. Incident types where person's age is 30 or 35

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

select distinct c.IncidentType from Crime c
join Victim v on c.CrimeID = v.CrimeID where v.Age in (30,35)
union
select distinct c.IncidentType from Crime c
join Suspect s on c.CrimeID = s.CrimeID where s.Age in (30,35);
```

150 %

Results | Messages

	Incident Type
1	Homicide
2	Robbery

11. Persons involved in Incidents of same types as 'Robbery'

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

select v.Name as Victim_Name, s.name as Suspect_Name from Crime c
left join Victim v on c.CrimeID = v.CrimeID
left join Suspect s on c.CrimeID = s.CrimeID
where c.IncidentType = 'Robbery';
```

150 %

Results | Messages

	Victim_Name	Suspect_Name
1	John Doe	Robber 1

12. Incident types with more than one open case

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

select IncidentType, Count(*) as Incident_Count from Crime where status = 'open'
group by IncidentType having count(*)>1;

--Since there's no more than 1 open Incident so output table is blank
```

150 %

Results   Messages

IncidentType	Incident_Count

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

```
--13.List all incidents with suspects whose names also appear as victims in other incidents--
select DISTINCT c.CrimeID, c.IncidentType, c.IncidentDate, c.Location, c.Status from Crime c
join Suspect s on c.CrimeID = s.CrimeID where s.Name in (select v.name from Victim v)

--Since there's no Suspect whose name also appear as Victims in other Incidents so
--the output table is going to be blank
```

150 %

Results   Messages

CrimeID	IncidentType	IncidentDate	Location	Status

14. Incidents along with victim and suspect details.

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

select c.*, v.Name as Victim_Name, s.name as Suspect_Name from Crime c
left join Victim v on c.CrimeID = v.CrimeId
left join Suspect s on s.CrimeID = s.CrimeID;
```

150 %

Results | Messages

	CrimeID	Incident Type	Incident Date	Location	Description	Status	Victim_Name	Suspect_Name
1	1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open	John Doe	Robber 1
2	1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open	John Doe	Unknown
3	1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open	John Doe	Suspect 1
4	2	Homicide	2023-09-20	456 Elm St, Townsville	Investigation into a murder case	Under Investigation	Jane Smith	Robber 1
5	2	Homicide	2023-09-20	456 Elm St, Townsville	Investigation into a murder case	Under Investigation	Jane Smith	Unknown
6	2	Homicide	2023-09-20	456 Elm St, Townsville	Investigation into a murder case	Under Investigation	Jane Smith	Suspect 1
7	3	Theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed	Alice Johnson	Robber 1
8	3	Theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed	Alice Johnson	Unknown
9	3	Theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed	Alice Johnson	Suspect 1

15. Suspect is older than any victim

```
--15.Find incidents where the suspect is older than any victim.
select c.* from Crime c join Suspect s on c.CrimeID = s.CrimeID
where s.Age > (Select Max(v.Age) from Victim v);

--Since there's no records in the crime table where the
--suspect's age is Greater than the maximum age of any victim.
```

150 %

Results | Messages

CrimeID	Incident Type	Incident Date	Location	Description	Status

16. Suspects involved in Multiple Incidents.

```
--16.Find suspects involved in multiple incidents.
select s.name, Count(c.CrimeId) as Incident_Count from Suspect s
join Crime c on s.CrimeID = c.CrimeID group by s.Name having count(c.CrimeID) > 1;

--Since there's no suspect involved in multiple incidents so output table going to be blank
```

name	Incident_Count

17. Incidents with no suspects involved

```
--17.List incidents with no suspects involved

select c.* from Crime c left join Suspect s on c.CrimeID = s.CrimeID
where s.SuspectID is Null;

--Since there's no record of any incident where is no suspect is invloved
```

CrimeID	Incident Type	IncidentDate	Location	Description	Status

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

```
--18.List all cases where at least one incident is of type 'Homicide' and all other incidents are of type 'Robbery'.
SELECT DISTINCT c1.CrimeID, c1.IncidentType, c1.IncidentDate, c1.Location, c1.Status
FROM Crime c1
WHERE c1.IncidentType = 'Homicide'
    OR c1.CrimeID IN (
        SELECT c2.CrimeID
        FROM Crime c2
        WHERE c2.IncidentType = 'Robbery'
);
```

	CrimeID	Incident Type	IncidentDate	Location	Status
1	1	Robbery	2023-09-15	123 Main St, Cityville	Open
2	2	Homicide	2023-09-20	456 Elm St, Townsville	Under Investigation

19. List of all incidents and associated suspects showing suspects for each incident or No Suspect if there are none.

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

select c.*, COALESCE(s.name, 'No Suspect') as Suspect_Name from Crime c
left join Suspect s on c.CrimeID = s.CrimeID;
```

150 %

Results | Messages

	CrimeID	Incident Type	IncidentDate	Location	Description	Status	Suspect_Name
1	1	Robbery	2023-09-15	123 Main St, Cityville	Armed robbery at a convenience store	Open	Robber 1
2	2	Homicide	2023-09-20	456 Elm St, Townsville	Investigation into a murder case	Under Investigation	Unknown
3	3	Theft	2023-09-10	789 Oak St, Villagetown	Shoplifting incident at a mall	Closed	Suspect 1

20. Suspects who have been involved in incidents with types of Robbery or Assault

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

Select Distinct s.Name from Suspect s join Crime c on s.CrimeID = c.CrimeID
where c.IncidentType In('Robbery','Assault');
```

150 %

Results | Messages

	Name
1	Robber 1