**SQL CODING Challenge : CRIME MANAGEMENT**

CREATE TABLE Crime (

CrimeID INT PRIMARY KEY,

IncidentType VARCHAR(255),

IncidentDate DATE,

Location VARCHAR(255),

Description TEXT,

Status VARCHAR(20)

);

CREATE TABLE Victim (

VictimID INT PRIMARY KEY,

CrimeID INT,

Name VARCHAR(255),

ContactInfo VARCHAR(255),

Injuries VARCHAR(255),

FOREIGN KEY (CrimeID) REFERENCES Crime(CrimeID)

);

CREATE TABLE Suspect (

SuspectID INT PRIMARY KEY,

CrimeID INT,

Name VARCHAR(255),

Description TEXT,

CriminalHistory TEXT,

FOREIGN KEY (CrimeID) REFERENCES Crime(CrimeID)

);

INSERT INTO Crime (CrimeID, IncidentType, IncidentDate, Location, Description, Status)

VALUES

(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

Investigation'),

(3, 'Theft', '2023-09-10', '789 Oak St, Villagetown', 'Shoplifting incident at a mall', 'Closed'),

(4, 'Assault', '2023-08-25', '101 Pine St, Metrocity', 'Physical altercation between two individuals', 'Closed'),

(5, 'Burglary', '2023-07-14', '202 Birch Rd, Suburbia', 'House break-in and theft of valuables', 'Open'),

(6, 'Vandalism', '2023-09-05', '303 Maple Ave, Urbanville', 'Graffiti on public property', 'Under Investigation'),

(7, 'Fraud', '2023-06-22', '404 Cedar Blvd, Citytown', 'Credit card fraud at a shopping center', 'Closed'),

(8, 'Arson', '2023-05-30', '505 Spruce Dr, Metropolis', 'Deliberate fire set at an office building', 'Under Investigation'),

(9, 'Kidnapping', '2023-09-01', '606 Fir St, Citytown', 'Reported abduction of a child', 'Open'),

(10, 'Drug Offense', '2023-08-18', '707 Redwood Ln, Townsville', 'Illegal drug possession during a traffic stop', 'Closed');

INSERT INTO Victim (VictimID, CrimeID, Name, ContactInfo, Injuries)

VALUES

(1, 1, 'John Doe', 'johndoe@example.com', 'Minor injuries'),

(2, 2, 'Jane Smith', 'janesmith@example.com', 'Deceased'),

(3, 3, 'Alice Johnson', 'alicejohnson@example.com', 'None'),

(4, 4, 'Michael Brown', 'michaelbrown@example.com', 'Broken arm'),

(5, 5, 'Sarah Davis', 'sarahdavis@example.com', 'Psychological trauma'),

(6, 6, 'David Wilson', 'davidwilson@example.com', 'None'),

(7, 7, 'Emily Clark', 'emilyclark@example.com', 'Financial loss'),

(8, 8, 'James Miller', 'jamesmiller@example.com', 'Severe burns'),

(9, 9, 'Olivia Taylor', 'oliviataylor@example.com', 'Unharmed'),

(10, 10, 'Robert Martinez', 'robertmartinez@example.com', 'None');

INSERT INTO Suspect (SuspectID, CrimeID, Name, Description, CriminalHistory)

VALUES

(1, 1, 'Robber 1', 'Armed and masked robber', 'Previous robbery convictions'),

(2, 2, 'Unknown', 'Investigation ongoing', NULL),

(3, 3, 'Suspect 1', 'Shoplifting suspect', 'Prior shoplifting arrests');

(4, 4, 'Assailant 1', 'Involved in a physical altercation', 'Assault charges in 2021'),

(5, 5, 'Burglar 1', 'Seen fleeing the scene of a burglary', 'Multiple burglary convictions'),

(6, 6, 'Vandal 1', 'Graffiti artist identified on CCTV', 'Prior vandalism offenses'),

(7, 7, 'Fraudster 1', 'Credit card fraud suspect', 'Previous fraud-related offenses'),

(8, 8, 'Arsonist 1', 'Suspected of setting fire to the building', 'Arson charge in 2018'),

(9, 9, 'Kidnapper 1', 'Last seen with the abducted child', 'No prior criminal record'),

(10, 10, 'Drug Dealer 1', 'Suspected of drug possession and trafficking', 'Arrested for drug offenses in 2020');

Query 1:

SELECT \*

FROM crime

where status = 'open';

Query 2:

SELECT COUNT(\*) AS TotalIncidents

FROM Crime;

Query 3:

SELECT DISTINCT IncidentType

FROM Crime;

Query 4:

SELECT \*

from crime

where incidentdate between '2023-09-01' and '2023-09-10';

Query 5:

select name , age, 'suspect' as role

from suspect

union all

select name , age, 'victim' as role

from victim

order by age desc;

Query 6:

select avg(age), 'victim' as role

from victim

union all

select avg(age), 'suspect' as role

from suspect;

Query 7:

select incidenttype as 'incidenttype(open)', count(\*)

from crime

where status = 'open'

group by incidenttype;

Query 8:

SELECT Name, 'Victim' AS Role

FROM Victim

WHERE Name LIKE '%Doe%'

UNION ALL

SELECT Name, 'Suspect' AS Role

FROM Suspect

WHERE Name LIKE '%Doe%';

Query 9:

select crimeid, name, 'suspect' as role

from suspect

where crimeid in (select crimeid from crime where status in ('open', 'closed'))

union all

select crimeid, name, 'victim' as role

from victim

where crimeid in (select crimeid from crime where status in ('open','closed'))

order by crimeid;

Query 10:

select incidenttype

from crime

where crimeid in (select crimeid from suspect where age = 30 or age = 35

union all

select crimeid from victim where age = 30 or age = 35

);

OR

select distinct incidenttype

from crime

join victim on crime.crimeid = victim.crimeid

where age in (30,35)

union

select distinct incidenttype

from crime

join suspect on crime.crimeid = suspect.crimeid

where age in (30,35);

Query 11:

select name from victim

join crime on victim.crimeid = crime.crimeid

where incidenttype = 'robbery'

union all

select name from suspect

join crime on crime.crimeid = suspect.crimeid

where incidenttype = 'robbery';

Query 12:

select incidenttype

from crime

where status = 'open'

group by incidenttype

having count(crimeid) > 1;

Query 13:

SELECT c.CrimeID, c.IncidentType

FROM Crime c

INNER JOIN Suspect s ON c.CrimeID = s.CrimeID

WHERE s.Name IN (SELECT v.Name FROM Victim v);

Query 14:

SELECT

C.CrimeID,

C.IncidentType,

C.IncidentDate,

C.Location,

C.Description,

C.Status,

V.Name AS VictimName,

V.ContactInfo AS VictimContact,

V.Injuries,

S.Name AS SuspectName,

S.Description AS SuspectDescription,

S.CriminalHistory

FROM

Crime C

LEFT JOIN

Victim V ON C.CrimeID = V.CrimeID

LEFT JOIN

Suspect S ON C.CrimeID = S.CrimeID

ORDER BY

C.crimeid;

Query 15:

SELECT

C.CrimeID,

C.IncidentType,

C.IncidentDate,

C.Location,

C.Description,

C.Status,

S.Name AS SuspectName,

S.Age AS SuspectAge,

V.Name AS VictimName,

V.Age AS VictimAge

FROM

Crime C

JOIN

Suspect S ON C.CrimeID = S.CrimeID

JOIN

Victim V ON C.CrimeID = V.CrimeID

WHERE

S.Age > V.Age;

Query 16:

select suspectid, name, count(crime.crimeid)

from suspect

join crime on crime.crimeid = suspect.crimeid

group by suspect.suspectid, suspect.name

having count(distinct crime.crimeid) > 1;

query 17:

select \* from crime

where crimeid not in (select crimeid from suspect);

Query 19:

SELECT

C.CrimeID,

C.IncidentType,

C.IncidentDate,

C.Location,

C.Description,

C.Status,

COALESCE(S.Name, 'No Suspect') AS SuspectName

FROM

Crime C

LEFT JOIN

Suspect S ON C.CrimeID = S.CrimeID

ORDER BY

C.CrimeID;

Query 20:

SELECT DISTINCT s.Name

FROM Suspect s

JOIN Crime c ON s.CrimeID = c.CrimeID

WHERE c.IncidentType IN ('Robbery', 'Assault');