DBMS PROJECT REPORT

PROJECT NAME: CRIMINAL DATABASE MANAGEMENT SYSTEM

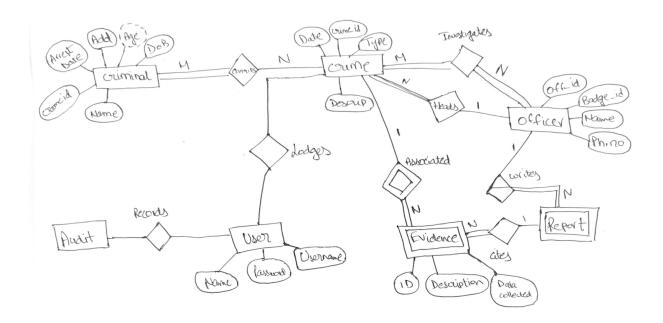
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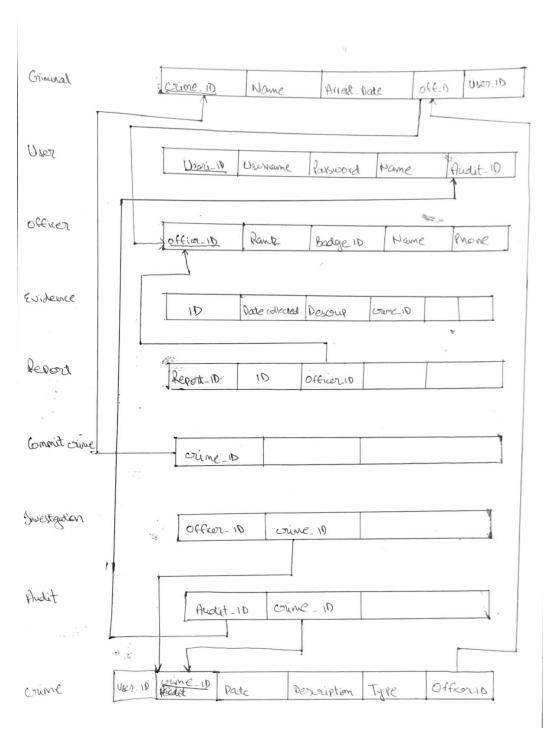
OVERVIEW:

The **Criminal Database Management System (CDMS)** is an software solution designed to efficiently manage and track information related to criminal records, investigations, and case management. The system serves as a centralized platform for storing and managing criminal data while enhancing collaboration among law enforcement officers, head officers, and users.

ER DIAGRAM:



RELATION SCHEMA:



DDL QUERIES:

TABLE CREATION QUERY:

```
CREATE TABLE Criminal (
criminal_ID INT PRIMARY KEY auto_increment,
crime_ID INT,
Name VARCHAR(100),
Date_of_Birth DATE,
Status ENUM('Incarcerated', 'Free'),
Gender ENUM('Male', 'Female'),
Height DECIMAL(4,1),
Weight DECIMAL(4,1),
Eye_Color VARCHAR(10),
Hair_Color VARCHAR(10),
Skin_Tone ENUM('Dark', 'Light', 'Medium'),
Build VARCHAR(50),
Tattoos ENUM('Yes', 'No'),
No_of_Tattoos INT,
Blood_Type ENUM('A+', 'A-', 'B+', 'B-', 'AB+', 'AB-', '0+', '0-'),
Crime_Category VARCHAR(255),
Convictions INT DEFAULT 0,
Last Known Address TEXT,
Warrant_Status ENUM('Active', 'Inactive'),
Phone_Number VARCHAR(50),
Known_Email_Address VARCHAR(100)
```

```
CREATE TABLE Crime (
    crime_ID INT PRIMARY KEY auto_increment,
    officer_ID INT,
    user_ID INT,
    Type_of_Crime ENUM (
    'Violent Crime',
'Property Crime',
'White-Collar Crime',
     'Organized Crime',
    'Drug-Related Crime',
    'Environmental Crime',
    'Hate Crime',
'Other Crime'
    Exact_Crime VARCHAR(100),
    Date_of_Crime DATE,
    Time_of_Crime TIME,
    Description TEXT,
    Victim_Name VARCHAR(255),
    Victim_Contact VARCHAR(100),
    Reported_By VARCHAR(100),
    Arrest_Date DATE,
    Case_Status ENUM('Under Investigation', 'Closed', 'Solved')
```

```
CREATE TABLE Officer (
    officer_id INT PRIMARY KEY auto_increment,
    ranking VARCHAR(50),
    badge_number VARCHAR(50) UNIQUE,
   status enum('Active', 'InActive', 'On Leave')
);
CREATE TABLE User (
    user_id INT PRIMARY KEY AUTO_INCREMENT,
   username VARCHAR(50) UNIQUE NOT NULL,
   password VARCHAR(255) NOT NULL,
   email VARCHAR(255) UNIQUE NOT NULL,
   role ENUM('HeadOfficer', 'Officer', 'User') NOT NULL,
    status ENUM('Active', 'Inactive', 'Suspended') DEFAULT 'Active'
);
CREATE TABLE UserProfile (
    user_id INT PRIMARY KEY,
   first_name VARCHAR(100) NOT NULL,
   last_name VARCHAR(100) NOT NULL,
   phone_number VARCHAR(15),
   profile_picture VARCHAR(255),
   address VARCHAR(255),
   date_of_birth DATE,
   FOREIGN KEY (user_id) REFERENCES User(user_id)
);
CREATE TABLE AuditLog (
    log_id INT PRIMARY KEY AUTO_INCREMENT,
    user_id INT,
    action_type VARCHAR(50),
    action_timestamp DATETIME,
    status ENUM('Success', 'Failure'),
   details TEXT,
   foreign key (user_id) references User(user_id)
```

```
CREATE TABLE Report (
   report_id INT PRIMARY KEY AUTO_INCREMENT,
     officer_id INT,
     details TEXT,
     report_date DATETIME DEFAULT CURRENT_TIMESTAMP,
     summary TEXT,
     foreign key (officer_id) references Officer(officer_id)
 CREATE TABLE Evidence (
     evidence_id INT PRIMARY KEY AUTO_INCREMENT,
     crime_id INT,
     report_id INT,
   officer_id INT,
   evidence_type ENUM('Physical', 'Photographic', 'Video', 'Audio', 'Testimonial',
   collection_date DATETIME DEFAULT CURRENT_TIMESTAMP,
   storage_location VARCHAR(255),
   description TEXT,
    foreign key (crime_id) references Crime(Crime_ID),
     foreign key (report_id) references Report(Report_ID)
 CREATE TABLE Commits_Crime (
    crime_id INT,
     criminal_id INT,
     foreign key (crime_id) references Crime(crime_id),
     foreign key (criminal_id) references Criminal(criminal_id)
CREATE TABLE Investigates (
  officer_ID INT,
     crime_ID INT,
     foreign key (crime_id) references Crime(crime_id),
     foreign key (officer_id) references Officer(officer_id)
```

DML QUERIES:

1.DATA RETERIVAL QUERIES

SELECT LAST_INSERT_ID() AS inserted_id; END;

Description:

This statement retrieves the id of the last record inserted into a table during the current session using the LAST_INSERT_ID() function and assigns it the alias inserted_id for reference. It is typically used in stored procedures to capture the auto-incremented primary key of the newly inserted row.

5.INSERT QUERIES:

```
INSERT INTO User (user_id, username, password, email, role, status)
(1, 'john_doe', 'password123', 'john.doe@example.com', 'HeadOfficer', 'Active'),
(2, 'jane_smith', 'password456', 'jane.smith@example.com', 'Officer', 'Active'),
(3, 'alice_jones', 'password789', 'alice.jones@example.com', 'User', 'Active'),
(4, 'bob_brown', 'password012', 'bob.brown@example.com', 'Officer', 'Inactive'),
(5, 'charlie_white', 'password345', 'charlie.white@example.com', 'User', 'Active'),
(6, 'david_black', 'password678', 'david.black@example.com', 'Officer', 'Active'),
(7, 'emily_green', 'password901', 'emily.green@example.com', 'User', 'Active'),
(8, 'frank_blue', 'password234', 'frank.blue@example.com', 'Officer', 'Inactive'),
(9, 'grace_red', 'password567', 'grace.red@example.com', 'User', 'Active'),
(10, 'hannah_yellow', 'password890', 'hannah.yellow@example.com', 'Officer', 'Active'),
(11, 'ian_purple', 'password123', 'ian.purple@example.com', 'HeadOfficer', 'Active'),
(12, 'lucy_brown', 'password1234', 'lucy.brown@example.com', 'Officer', 'Active'),
(13, 'jack_black', 'password5678', 'jack.black@example.com', 'User', 'Active'),
(15, 'mike_green', 'password3456', 'mike.green@example.com', 'HeadOfficer', 'Active'), (16, 'susan_gray', 'password7890', 'susan.gray@example.com', 'User', 'Inactive');
INSERT INTO UserProfile (user_id, first_name, last_name, phone_number, profile_picture, address, date_of_birth)
(1, 'John', 'Doe', '1234567890', 'profile1.jpg', '123 Main St', '1980-05-15'),
(2, 'Jane', 'Smith', '0987654321', 'profile2.jpg', '456 Elm St', '1990-10-10'),
(3, 'Alice', 'Jones', '5678901234', 'profile3.jpg', '789 Oak St', '1985-08-20'), (4, 'Bob', 'Brown', '3456789012', 'profile4.jpg', '101 Pine St', '1982-03-12'),
(5, 'Charlie', 'White', '2345678901', 'profile5.jpg', '202 Maple St', '1992-06-25'),
(6, 'David', 'Black', '6789012345', 'profile6.jpg', '303 Cedar St', '1988-07-08'), (7, 'Emily', 'Green', '7890123456', 'profile7.jpg', '404 Birch St', '1995-09-01'), (8, 'Frank', 'Blue', '8901234567', 'profile8.jpg', '505 Redwood St', '1980-01-18'), (9, 'Grace', 'Red', '9012345678', 'profile9.jpg', '606 Fir St', '1991-12-14'),
(10, 'Hannah', 'Yellow', '0123456789', 'profile10.jpg', '707 Spruce St', '1983-11-22'),
(11, 'Ian', 'Purple', '1234987650', 'profile11.jpg', '808 Ash St', '1975-10-30'), (12, 'Lucy', 'Brown', '3456789012', 'profile12.jpg', '123 Maple Ave', '1994-04-14'), (13, 'Jack', 'Black', '4567890123', 'profile13.jpg', '456 Birch Blvd', '1992-07-22'),
(14, 'Olivia', 'White', '5678901234', 'profile14.jpg', '789 Oak Drive', '1990-11-03'), (15, 'Mike', 'Green', '6789012345', 'profile15.jpg', '123 Cedar Lane', '1985-02-19'), (16, 'Susan', 'Gray', '7890123456', 'profile16.jpg', '321 Pine Rd', '1988-09-15');
INSERT INTO Officer (officer_id, ranking, badge_number, status)
(1, 'Sergeant', '1234A', 'Active'),
(2, 'Lieutenant', '5678B', 'Active'),
(3, 'Detective', '9012C', 'On Leave'),
(4, 'Captain', '3456D', 'Active'),
(5, 'Inspector', '7890E', 'Inactive'),
(6, 'Sergeant', '2345F', 'Active'),
(7, 'Lieutenant', '6789G', 'On Leave'), (8, 'Detective', '0123H', 'Active'), (9, 'Captain', '4567I', 'Active'),
(10, 'Inspector', '8901J', 'Inactive'),
(11, 'Sergeant', '1357K', 'Active'),
(14, 'Sergeant', '2345J', 'Active'),
(15, 'Captain', '3456K', 'On Leave'),
(16, 'Inspector', '4567L', 'Active');
```

```
INSERT INTO Crime (crime_ID, officer_ID, user_ID, Type_of_Crime, Exact_Crime, Date_of_Crime, Line_of_Crime, Location, Description, Victim_Name, Victim_Contact, Reported_By, Arrest_Date, Case_Status)
(189, 9, 18, 'Mhite-Collar Crime', 'Identity Theft', '2023-10-01', '08245:00', '678 Maple St', 'Suspected identity theft in financial transactions.', 'Linda Brown', '9012345678', 'Ian Purple', '2023-10-03', 'Under Investigation'),
INSERT INTO Criminal (crime_ID, Name, Date of Birth, Status, Gender, Height, Weight, Eye_Color, Hair_Color, Skin_Tone, Build, Tattoos, No_of_Tattoos, Blood_Type, Crime_Category, Convictions, Last_Known_Address, Warrant_Status, Phone_Number, Known_Email_Address
(102, 'Sarah Green', '1990-04-22', 'Free', 'Female', 5.6, 135.3, 'Blue', 'Blonde', 'Light', 'Slim', 'No', 0, 'A-', 'Property Crime', 0, '456 Elm St', 'Inactive', '0907654321', 'sarahggyahoo.com'),
(187, 'Nancy Clark', '1995-06-30', 'Free', 'Female', 5.6, 145.0, '9lue', 'Red', 'Light', 'Slim', 'No', 0, 'B-', 'Public Order Crime', 0, '234 Cedar St', 'Active', '7890123456', 'nancycegnail.com'), (180, 'George Wilson', '1908-12-01', 'Incarcerated', 'Male', 6.0, 175.3, 'Brown', 'Black', 'Oark', 'Stocky', 'Yes', 5, '0+', 'Organized Crime', 3, '543 Odk St', 'Active', '8901234567', 'georgew@yahoo.com'), (180, 'Linda Brown', '1993-05-18', 'Free', 'Female', 5.4, 125.6, 'Green', 'Blonde', 'Light', 'Slim', 'No', 0, 'A8-', 'White-Collar Crime', 1, '678 Maple St', 'Inactive', '9012345678', 'Linda@gowtlook.com'),
(110, 'Jack Turmer', '1999-09-03', 'Incarcerated', 'Wale', 6.2, 180.7, 'Brown', 'Brown', 'Medium', 'Athletic', 'Yes', 2, 'A-', 'Property Crime', 2, '899 Ash St', 'Active', '0123456789', 'jackt@mmail.com'), (111, 'John Doe', '1987-05-21', 'Free', 'Male', 5.8, 170.5, 'Brown', 'Black', 'Wedium', 'Athletic', 'No', 0, 'A-', 'Property Crime', 0, '123 Birch St', 'Active', '1234987650', 'johndoe@example.com'),
(115, 'Chris Black', '1992-07-30', 'Free', 'Male', 5.9, 170.0, 'Hazel', 'Red', 'Medium', 'Lean', 'No', 0, 'B-', 'Public Order Crime', 0, '567 Cedar St', 'Active', '5678901234', 'chrisblack@example.com');
INSERT INTO Commits_Crime (crime_id, criminal_id)
(101, 1).
(102, 2),
(103, 3),
(105, 5),
(108, 8),
(109, 9).
(110, 10).
(101, 5).
(111, 11),
(114, 14),
```

```
INSERT INTO Investigates (officer_ID, crime_ID)
(1, 101),
(2, 102),
(3, 103),
(4, 104),
(5, 105),
(6, 106),
(7, 107),
(8, 108),
(9, 109),
(10, 110),
(1, 106),
(12, 111),
(14, 113),
(15, 114),
(16, 115);
INSERT INTO AuditLog (user_id, action_type, action_timestamp, status, details)
(1, 'Login', '2023-10-15 10:00:00', 'Success', 'Head Officer John Doe logged in successfully'),
(2, 'Update', '2023-10-15 11:00:00', 'Success', 'Officer Jane Smith updated a crime report.'), (3, 'Login', '2023-10-16 09:30:00', 'Success', 'Alice Jones logged in successfully.'),
(4, 'Update', '2023-10-16 10:45:00', 'Success', 'Bob Brown updated a profile picture.'), (5, 'Login', '2023-10-17 08:00:00', 'Success', 'Charlie White logged in successfully.'),
(5, 'Login', '2023-10-17 08:00:00', 'Success', 'Charlie White logged in Successfully.'), (6, 'Logout', '2023-10-17 12:15:00', 'Success', 'David Black logged out successfully.'), (7, 'Login', '2023-10-18 11:20:00', 'Success', 'Emily Green logged in successfully.'), (8, 'Update', '2023-10-18 13:30:00', 'Success', 'Frank Blue updated a crime report.'), (9, 'Login', '2023-10-19 14:00:00', 'Success', 'Grace Red logged in successfully.'), (10, 'Update', '2023-10-19 15:20:00', 'Success', 'Hannah Yellow updated a profile.'), (11, 'Login', '2023-10-20 09:10:00', 'Success', 'Ian Purple logged in successfully.');
INSERT INTO Report (officer_id, details, summary)
(2, 'Detailed report on burglary.', 'Summary of the stolen items and witness statements.'),
(3, 'Report on vandalism.', 'Summary of the damage caused and potential suspects.'),
(4, 'Financial crime report.', 'Detailed information on fraudulent activity and transactions.'),
(5, 'Drug crime report.', 'Details on the drug-related crime scene and evidence.'),
(10, 'Property damage report.', 'Summary of public property damage and investigative actions.'),
(12, 'Detailed report on vandalism.', 'Summary of the damage and suspects involved.'),
(13, 'Detailed report on drug possession.', 'Report on evidence collected at the scene.'),
(14, 'Assault report and witness statements.', 'Summary of the altercation and interviews.'),
(15, 'Burglary report and stolen items.', 'Details of the items taken and investigation details.'),
(16, 'Disturbance report and public safety actions.', 'Summary of the incident and crowd control measures.');
```

```
INSERT INTO Evidence (crime_id, report_id, officer_id, evidence_type, collection_date, storage_location, description)

VALUES

(101, 1, 1, 'Physical', '2023-01-15 14:30:00', 'Evidence Locker 1', 'Assault weapon found at the crime scene.'),

(102, 2, 2, 'Photographic', '2023-02-12 02:45:00', 'Evidence Locker 2', 'Photograph of the burglary scene showing broken windows.'),

(103, 3, 3, 'Video', '2023-03-10 18:30:00', 'Evidence Locker 3', 'Surveillance video showing vandalism at the store.'),

(104, 4, 4, 'Forensic', '2023-04-25 10:15:00', 'Evidence Locker 4', 'Forensic analysis of stolen credit card transactions.'),

(105, 5, 5, 'Biometric', '2023-06-05 23:40:00', 'Evidence Locker 5', 'Fingerprint analysis from the crime scene related to drug possession.'),

(106, 6, 6, 'Audio', '2023-07-20 01:00:00', 'Evidence Locker 6', 'Audio recording of the assault incident.'),

(107, 7, 'Electronic Device', '2023-08-10 16:00:00', 'Evidence Locker 7', 'Stolen laptop recovered from the supermarket theft incident.'),

(108, 8, 8, 'Testimonial', '2023-09-18 03:30:00', 'Evidence Locker 8', 'Eyewitness testimony regarding armed robbery at a convenience store.'),

(109, 9, 9, 'Photographic', '2023-10-01 08:45:00', 'Evidence Locker 9', 'Photograph of identity theft victim's financial documents.'),

(110, 10, 'Handwritten', '2023-12-00 10:30:00', 'Evidence Locker 11', 'A crowbar found at the scene of the vandalism.'),

(111, 11, 'Physical', '2023-12-01 10:30:00', 'Evidence Locker 12', 'Photograph of the drug stash found during the raid.'),

(113, 13, 13, 'Video', '2023-12-01 16:45:00', 'Evidence Locker 11', 'NA analysis from a bloodstain found at the scene of the assault.'),

(114, 14, 14, 'Forensic', '2023-12-10 16:45:00', 'Evidence Locker 15', 'Facial recognition data from a CCTV camera during the robbery.');
```

8. PROCEDURE

```
CREATE PROCEDURE InsertCrimeRecord (IN p_user_id INT,IN p_Type_of_Crime VARCHAR(50),IN p_Date_of_Crime DATE,IN p_Time_of_Crime TIME,IN p_Location VARCHAR(255),
IN p_Reported_By VARCHAR(50)) BEGIN INSERT INTO Crime (user_id, officer_ID, Type_of_Crime, Exact_Crime, Date_of_Crime, Time_of_Crime, Location, Description, Victim_Name,
Victim_Contact, Reported_By, Arrest_Date, Case_Status) VALUES (p_user_id, NULL, p_Type_of_Crime, NULL, p_Date_of_Crime, p_Time_of_Crime, p_Location, NULL, NULL, NULL, p_Reported_By, NULL, NULL);
```

Description:

This stored procedure, InsertCrimeRecord, inserts a new crime record into the Crime table with the provided details such as user ID, type of crime, date, time, location, and reported by, while leaving other fields as NULL.

9. FUNCTIONS

```
CREATE FUNCTION InsertCriminal(p_Crime_ID INT,p_Name VARCHAR(255),p_Date_of_Birth DATE,p_Status VARCHAR(100),p_Gender VARCHAR(50),p_Height DECIMAL(5,2),
p_Weight DECIMAL(5,2),p_Eye_Color VARCHAR(50),p_Hair_Color VARCHAR(50),p_Skin_Tone VARCHAR(50),p_Build VARCHAR(50),p_Tattoos TEXT,p_No_of_Tattoos INT,p_Blood_Type VARCHAR(10),
p_Crime_Category VARCHAR(100),p_Convictions TEXT,p_Last_Known_Address TEXT,p_Marrant_Status VARCHAR(50),p_Phone_Number VARCHAR(20),
p_Known_Email_Address VARCHAR(255)) RETURNS VARCHAR(255) DETERMINISTIC READS SQL DATA BEGIN INSERT INTO Criminal (Crime_ID, Name, Date_of_Birth, Status, Gender, Height,
Weight, Eye_Color, Hair_Color, Skin_Tone, Build, Tattoos, No_of_Tattoos, Blood_Type, Crime_Category, Convictions, Last_Known_Address, Marrant_Status, Phone_Number, Known_Email_Address)
VALUES @ p_Crime_ID, p_Name, p_Date_of_Birth, p_Status, p_Gender, p_Height, p_Weight, p_Eye_Color, p_Hair_Color, p_Skin_Tone, p_Build,p_Tattoos, p_No_of_Tattoos, p_Blood_Type, p_Crime_Category,
p_Convictions, p_Last_Known_Address, p_Warrant_Status, p_Phone_Number, p_Known_Email_Address)

| p_Convictions, p_Last_Known_Address, p_Warrant_Status, p_Phone_Number, p_Known_Email_Address) | RETURN 'Criminal record inserted successfully'; END;
```

10. TRIGGERS

```
CREATE TRIGGER log_crime_insert AFTER INSERT ON Crime FOR EACH ROW BEGIN IF (NEW.crime_ID IS NOT NULL)
THEN INSERT INTO Auditlog (user_id, action_type, action_timestamp, status, details) VALUES (NEW.user_id, 'INSERT', NOW(), 'Success', CONCAT('New Crime ID: ', NEW.crime_ID)); END IF; END;
```

Description:

This trigger logs every new record inserted into the Crime table into the AuditLog table. It records the user_id, action type (INSERT), timestamp, status (Success), and details including the newly added crime_ID, provided it is not null.

CREATE TRIGGER log_crime_update AFTER UPDATE ON Crime FOR EACH ROW BEGIN IF (NEW.crime_ID IS NOT NULL) THEN INSERT INTO AuditLog [user_id, action_type, action_timestamp, status, details] VALUES (NEW.user_id, 'UPDATE', NOW(), 'Success', CONCAT('Updated Crime ID: ', NEW.crime_ID));END IF;END;

Description:

This trigger logs updates to records in the Crime table by inserting an entry into the AuditLog table. It records the user_id, action type (UPDATE), timestamp, status (Success), and details of the updated crime_ID when a valid crime_ID is modified.

CREATE TRIGGER log_crime_delete AFTER DELETE ON Crime FOR EACH ROW BEGIN IF (OLD.crime_ID IS NOT NULL) THEN INSERT INTO Auditlog

[user_id, action_type, action_timestamp, status, details] VALUES (OLD.user_id, 'DELETE', NOW(), 'Success', CONCAT('Deleted Crime ID: ', OLD.crime_ID)); END IF; END;

Description:

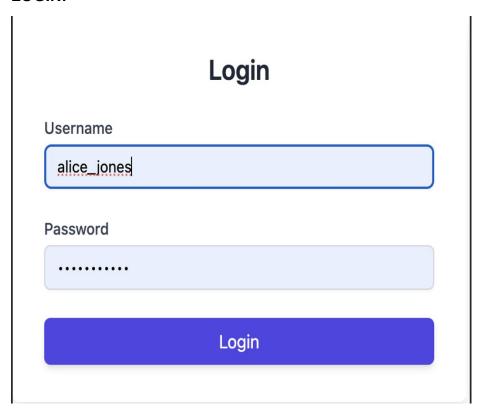
This trigger logs the deletion of records from the Crime table into the AuditLog table. It captures details such as the user_id, action type (DELETE), timestamp, status (Success), and the deleted crime_ID when a valid crime_ID is removed.

FRONTEND:

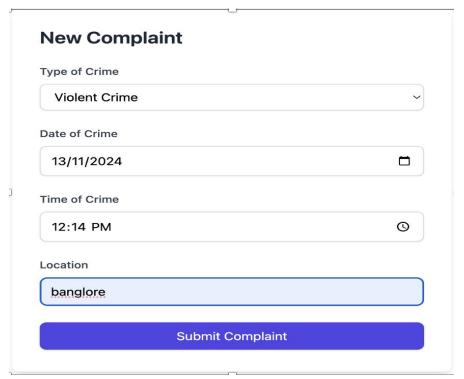
REGISTER (for user):

Register
Username
Email
Password
Confirm Password
Role User Y
Register

LOGIN:

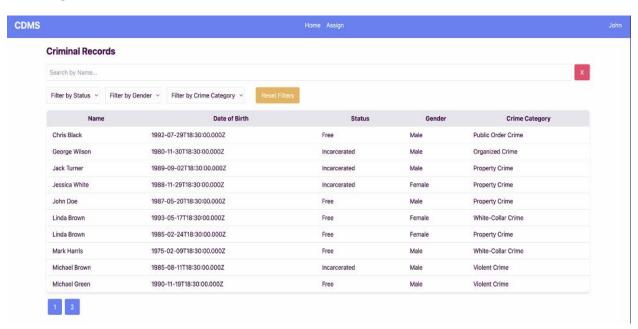


USER (add complaint):

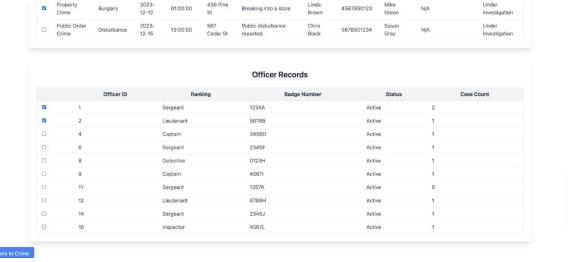




HEAD OFFICER:

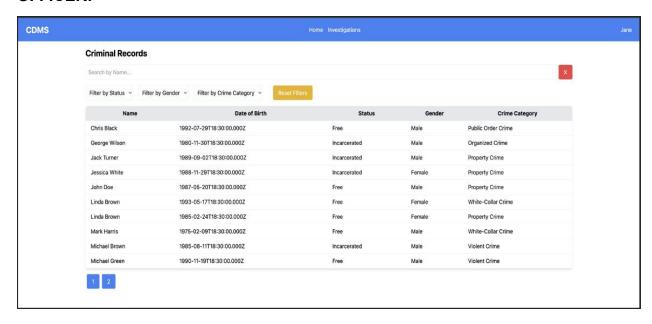


HEAD OFFICER (assign officers):



		Officer Records		
Officer ID	Ranking	Badge Number	Status	Case Count
1	Sergeant	1234A	Active	3
2	Lieutenant	5678B	Active	2

OFFICER:



OFFICER (add criminal):

