Missing People Database Management System

IST 659 Project Implementation Report

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I. Project Summary

This project focuses on designing a data base system for the Indian Police to keep track of the Data for Unidentified and Missing persons. India has a very high volume of child trafficking and missing people. Thousands of people go missing and more than thousands of people are untraced and unidentified. With the high volume of missing people and child trafficking, India still lacks a system to track and identify missing people. There are thousands of beggars on the street and thousands of girls working as sex slave, but the law enforcement has failed to track and identify. India clearly needs a centralized system for managing and tracking missing people and trying to identify the unidentified people roaming and begging for food on the streets. There is no system available or dataset which can be used to trace people. The only data available is in the form of First Information Report (F.I.R.) which is filed by the law enforcement during the complain of the missing people and that information also lacks digitalized format. Building a common system for law and people is the feasible solution.

A root cause of child trafficking in India is due to poverty, need to support family which cause child labor and lack of education. Missing and abducted children are forced to beg on the street and missing girls are forced to trade herself for sex. Trafficking of young girls (under age of 18) has grown 14 times over the last decade and grown by 65% just in the year 2014 according to the National Crime Record Bureau. According to the US State Department, there are approximately 600,000 to 820,000 people trafficked a year across international borders, and up to 50% of those are children. In India specifically, it is estimated that there are around 135,000 children trafficked each year.

The following system will be used to keep track of the Data for Unidentified and Missing persons. The system will bridge the gap between the populous and the authorities and will promote transparency. People can file the complaint and keep track of the same and the responsible authorities can use the same data to carry out their investigation and close the case on time. Since the investigation's findings will be public, this will add the required pressure and urgency on the authority's side to solve and close the case. The data base will also digitize the process of filing complaint and improve the data storage, getting rid of any delays from the authorities and red tapism, which exists in the present organizations. It will also eliminate any human error which exists when filling reports and allotting cases.

The process will be as follows:

1. A user is registered in the data base
2. The Registered used files a missing person report with the required information needed to identify the individual
3. Once the FIR is generated, a Police department is assigned the case which then assign a case to the Police office

II. Entity and Attribute table

1. *Registered User table*

The table will content the data of the registered user. Registration is mandatory if a person wants to file a complain of missing person. While registration user must provide the government identification number which will prove the authenticity of the registered user and the complained filed.

RegisteredUser	
UID	User id generated by system – Primary Key
FName	First name of the user
LName	Last name of the user
AddressLine1	Address line 1 of the user
AddressLine2	Address line 2 of the user
City	Name of the city
State	Name of the state
Pincode	Pincode/Zipcode of the user
AadharCard	Addhar card number of the user. A form government identification number.
PrimaryNumber	Primary contact number
SecondaryNumber	Secondary contact number
EmailID	Email address of the user

2. *Police Department table*

This table will contain data of all the police department in the country. Department can be head office, police station or any district office.

PoliceDepartment	
PDID	Department id – Primary key
DepartmentName	Name of the police department.
DAddressLine1	Address line 1 of the department
DAddressLine2	Address line 2 of the department
DCity	Department City
DState	Department State
Pincode	Pincode/Zipcode of the department.
DepartmentHead	Head of the department

3. *Police Designation Information table*

This table will contain all the police designations available in the country with the designation name and their description.

PoliceDesginationInformation	
PDesID	Designation id – Primary Key
PositionName	Name of the position
PositionDescription	Description
Postion Abbreviation	Abbreviation of the position

4. *Police Information master*

Police Information master will have detail of all the active police officers in the country ranging from Head of the Police Department of India to police officer.

PoliceInformation	
PID	Police identification number/batch number
FName	First name of the police
LName	Last name of the police
PAddressLine1	Address line 1 of the police
PAddressLine2	Address line 2 of the police
PCity	City of the police
PState	State of the police
Pincode	Pincode/Zipcode of the police
PrimaryNumber	Primary number of the police
EmailID	Email id of the police
PoliceDepartmentInfo	Department place – Foreign key
PolicePositionInfo	Current Position – Foreign Key

5. *Complaint table*

This table will contain the filed complained with the FIR number. Table will have all the information about who filed the complaint, police officer assigned, in which department complaint was registered.

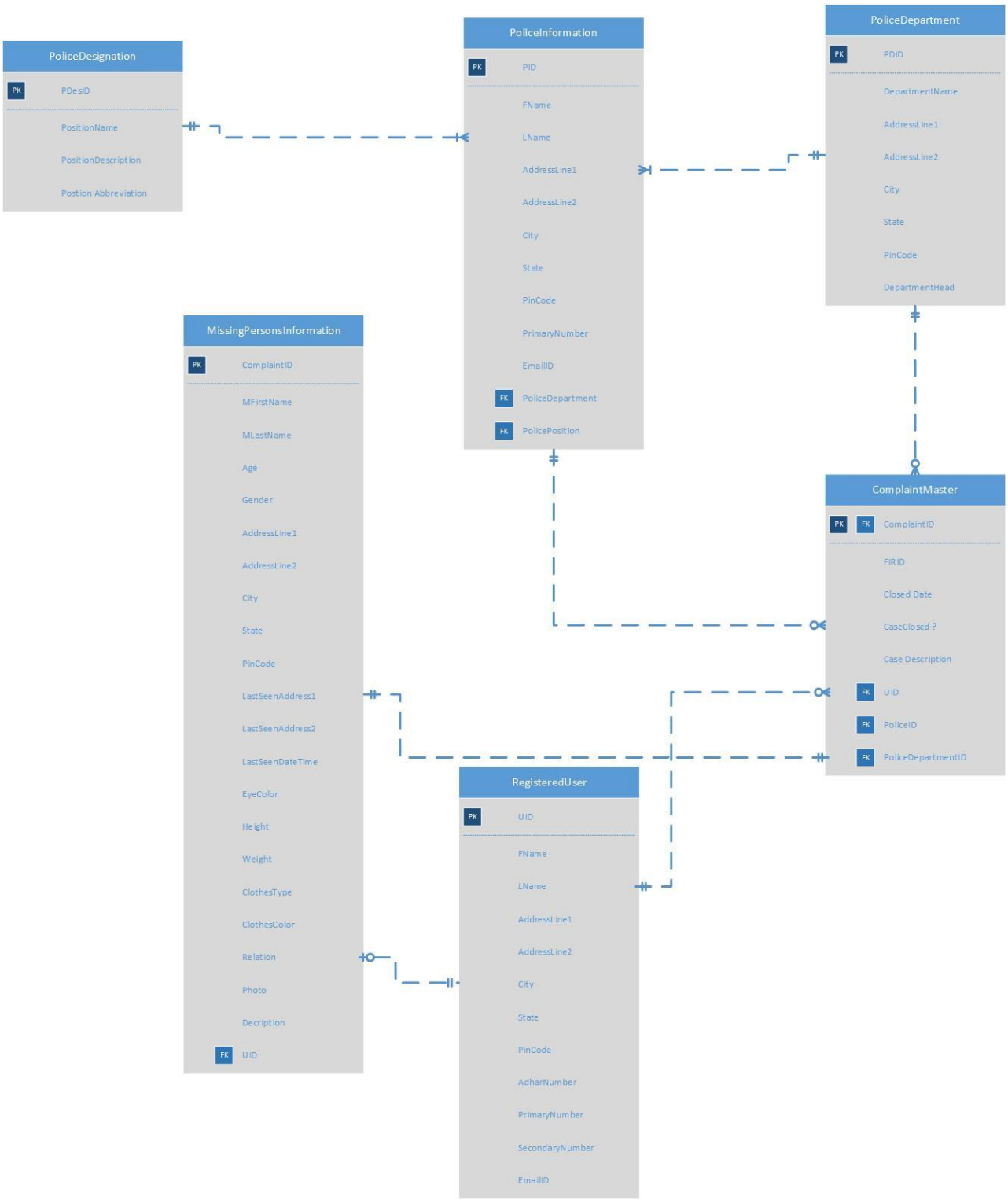
ComplainedMaster	
ComplainedID	Autogenerated id of the complained filed Primary Key and Foreign Key
MissingPersonID	Missing person id
FIRGeneratedID	FIR number generated by police department
PoliceID	Police id who filed the complaint and fir
PoliceStationID	Police station id where the complaint is registered
CaseClosedDate	Date on which the case was closed
IsSolved	Is the case is solved or not – default False
CaseClosingDescription	Detail and reason of closing the case

6. *Missing person information table*

This table will contain every single detail of the person missing. His/her name, age, sex, last seen location and date time, special identification marks and other details. The person filing the complain will also have to specify the relation to the missing person.

MissingPersonInformation	
ComplaintID	Missing person complaint id generated by system – Primary Key
MFirstName	First name
MLastName	Last name
Age	Age of the missing person
Gender	Sex of the missing person
AddressLine1	Address line 1 of the user
AddressLine2	Address line 2 of the user
City	Name of the city
State	Name of the state
Pincode	Pincode/Zipcode of the user
PrimaryNumber	Primary number of the Missing Police
LastSeenAddress1	Last location of the missing person
LastSeenAddress1	Last location of the missing person
LastSeenDateTime	Last seen date and time
EyeColor	Color of the eye
Height	Height of the missing person
Weight	Weight of the missing person
ClothesDescription	Description of the clothes
SkinColor	Color of the skin
ComplainedFiledBy	Complained filed by – Foreign Key to RegisterdUser table
Photo	Photo of the missing person
Relation	Relation to the person who filed the complain
Description	Identification marks and other description
UID	ID of the Registered User – Foreign Key

III. Entity Relation Diagram



IV. Database System Architecture

We used the following tools design the course of this project:

- **Microsoft Visio:** MS Visio was used to create the entity relation diagram for the project and conceptualize the attributes and relations of the different entities.
- **Microsoft Access:** MS Access was used to create the interface of the project system. We created forms which displayed necessary data to the user. We also used Access to generate reports
- **Microsoft SQL Server:** MS SQL server was used to create the database of the project. We wrote queries to make the various tables and inserted data using SQL. We also created views to using the same.
- **Flutter:** Flutter was used to make the mobile interface for the project system. Users can register themselves and generate complaints using their mobile devices or tablets.

V. SQL Scripts

1. *Creating tables*

Table : Police Designation

```
create table PoliceDesignation
(
    PDesID Char (10) primary key,
    PositionName VarChar(20) not null,
    PositionDesc VarChar(40) not null,
    PositionAbbr Char (4) not null
);
```

Table : Police Department

```
create table PoliceDepartment
(
    PDID Char (10) primary key,
    DepartmentName VarChar(20) not null,
    AddrLine1 VarChar(30) not null,
    AddrLine2 VarChar(30),
    City VarChar(20) not null,
    State VarChar(20) not null,
```

```
    Pincode Char (6) not null,
    DepartmentHead VarChar(20) not null
);
```

Table : Police Information

```
create table PoliceInfo
(
    PID Char (10) primary key,
    FName VarChar(20) not null,
    LName VarChar(20) not null,
    AddrLine1 VarChar(30) not null,
    AddrLine2 VarChar(30) not null,
    City VarChar(20) not null,
    State VarChar(20) not null,
    Pincode Char (6) not null,
    PrimaryNumber Char (10) not null,
    EmailID VarChar(30) not null,
    PoliceDepartment Char (10) not null,
    PoliceDesignation Char (10) not null,

    constraint dept_FK FOREIGN KEY (PoliceDepartment) REFERENCES PoliceDepartment(PDID),
    constraint des_FK FOREIGN KEY (PoliceDesignation) REFERENCES PoliceDesignation(PDesID)
);
```

Table : Registered User

```
create table RegisteredUser
(
    UID Char (10) primary key,
    FName VarChar(20) not null,
    LName VarChar(20) not null,
    AddrLine1 VarChar(30) not null,
    AddrLine2 VarChar(30),
```

```
    City VarChar(20) not null,
    State VarChar(20) not null,
    Pincode Char (6) not null,
    AdharNumber Char (12) not null,
    PrimaryNumber Char (10) not null,
    SecondaryNumber Char (10),
    EmailID VarChar(30) not null
);
```

Table : Missing Person Information

```
create table MissingPersonInfo
(
    ComplaintID Char (10) primary key,
    FName VarChar(20) not null,
    LName VarChar(20) not null,
    Age tinyint,
    Gender Char (1) not null,
    AddrLine1 VarChar(30) not null,
    AddrLine2 VarChar(30),
    City VarChar(20) not null,
    State VarChar(20) not null,
    Pincode Char (6) not null,
    LastSeenAddrLine1 VarChar(30) not null,
    LastSeenAddrLine2 VarChar(30),
    LastSeenDateTime datetime,
    EyeColor VarChar(10),
    Height tinyint,
    Weight tinyint,
    ClothesDescription VarChar(100),
    SkinColor VarChar(10),
    Relation VarChar(10),
    Photo blob,
```

```
    Description VarChar(40),
    UID Char (10) not null,

    constraint ru_FK FOREIGN KEY (UID) REFERENCES RegisteredUser(UID)
);
```

Table : Complaint Master

```
create table ComplaintMaster
(
    ComplaintID Char (10) primary key,
    FIRID Char (10) not null,
    ClosedDate date,
    CaseClosed bit not null,
    CaseDesc VarChar(50) not null,
    UID Char (10) not null,
    PoliceID Char (10) not null,
    PoliceDeptID Char (10) not null,

    constraint rucm_FK FOREIGN KEY (ComplaintID) REFERENCES MissingPersonInfo(ComplaintID),
    constraint rucm_FK FOREIGN KEY (UID) REFERENCES RegisteredUser(UID),
    constraint deptcm_FK FOREIGN KEY (PoliceDeptID) REFERENCES PoliceDepartment(PDID),
    constraint pcm_FK FOREIGN KEY (PoliceID) REFERENCES PoliceInfo(PID)
);
```

2. *Inserting values*

Table : Police Designation

```
INSERT INTO `policedesignation` (`PDesID`, `PositionName`, `PositionDesc`, `PositionAbbr`) VALUES
('1', 'Director General', 'Director General of Police', 'DGP'),
('2', 'Commissioner', 'Commissioner of Police', 'CP'),
('3', 'Deputy Commissioner', 'Deputy Commissioner of Police', 'DCP'),
('4', 'Asst Commissioner', 'Assitant Commissioner of Police', 'ACP'),
```

('5', 'Inspector', 'Inspector', 'I');

Table : Police Department

INSERT INTO `policedepartment` (`PDID`, `DepartmentName`, `AddrLine1`, `AddrLine2`, `City`, `State`, `Pincode`, `DepartmentHead`) VALUES

('1', 'Mumbai Police', 'D.N. RoadFort', NULL, 'Mumbai', 'Maharashtra', '400001', 'Sanjay Barve'),

('2', 'Chennai Police', 'EVK SAMPATH ROAD, VEPERY', NULL, 'Chennai', 'Tamil Nadu', '600007', 'Dr AK Viswanathan'),

('3', 'Delhi Police', 'Jai Singh Road', NULL, 'Delhi', 'New Delhi', '110002', 'Amulya Patnaik'),

('4', 'Bangalore Police', 'No. 1 Infantry Road', NULL, 'Bangalore', 'Karnataka', '560001', 'Bhaskar Rao'),

('5', 'Kolkata Police', '18, Lalbazar Street', NULL, 'Kolkata', 'West Bengal', '700001', 'Anuj Sharma'),

('6', 'Pune Police', '2, Sadhu Vaswani Road, Camp', NULL, 'Pune', 'Maharashtra', '411001', 'Dr. K Venkatesham'),

('7', 'Rajasthan Police', 'Lalkothi', NULL, 'Jaipur', 'Rajasthan', '302015', 'Dr. Bhupendra Singh'),

('8', 'Lucknow Police', '2, Under Cantt Flyover', 'Cantt Flyover,', 'Lucknow', 'Uttar Pradesh', '226002', 'Kala Nidhi Naithani');

Table : Police Infromation

INSERT INTO `policeinfo` (`PID`, `FName`, `LName`, `AddrLine1`, `AddrLine2`, `City`, `State`, `Pincode`, `PrimaryNumber`, `EmailID`, `PoliceDepartment`, `PoliceDesignation`) VALUES

('1', 'Laxman', 'Kumar', 'HPCL Officers Appartment', 'BKC', 'Mumbai', 'Maharashtra', '400051', '8754526547', 'laku@gmail.com', '1', '4'),

('2', 'Bhavish', 'Kumar', 'Parathe Wale Gali', 'Chandini Chok', 'Delhi', 'New Delhi', '110006', '1234567890', 'bhaku@gmail.com', '3', '4'),

('3', 'Prankur', 'Garg', 'Florentine', 'Sopan Baug', 'Pune', 'Maharashtra', '410038', '9874653210', 'prgarg@hotmail.com', '6', '3'),

('4', 'Pranav', 'Radha', '524, Grukripa', 'Kasturi nagar', 'Bangalore', 'Karnataka', '560054', '8939109415', 'pranav.r@gmail.com', '4', '4'),

('5', 'Dhrumil', 'Shah', 'Bhavanipur', NULL, 'Kolkata', 'WestBengal', '700020', '4563218971', 'dshah@gmail.com', '5', '5'),

('6', 'Shreya', 'Dixit', '6, Malviya Nagar', 'Opp VR', 'Jaipur', 'Rajasthan', '302006', '1234567890', 's.dixit@gmail.com', '7', '4'),

('7', 'Zainab', 'Merchant', 'Nirala Nagar', 'Near Anjuman Hosp', 'Lucknow', 'Uttar Pradesh', '226015', '9874653210', 'zainab.merch@yahoo.com', '8', '5'),

('8', 'Roshnee', 'Sundaraman', '1/24 G.S.T Road', NULL, 'Chennai', 'Tamil Nadu', '600027', '8939109415', 'roshnee@gmail.com', '2', '4'),

('9', 'Shubham', 'Shukla', '216/1', 'HSR Road', 'Bangalore', 'Karnataka', '560054', '4563218971', 'shukla1980@gmail.com', '4', '5'),

('10', 'Naveen ', 'Bagga', '1-55 F Near Jaipuria School', 'Vineet Khand, Gomtinagar', 'Lucknow', 'Uttar Pradesh', '226010', '1234567890', 'naveen1967@hotmail.com', '8', '5');

Table : Registered User

INSERT INTO `registereduser` (`UID`, `FName`, `LName`, `AddrLine1`, `AddrLine2`, `City`, `State`, `Pincode`, `AdharNumber`, `PrimaryNumber`, `SecondaryNumber`, `EmailID`) VALUES

('1', 'Sarthak', 'Tandon', '216', 'HPCL Appr', 'Mumbai', 'Maharahstra', '400051', '98754123011', '1234567890', '', 'srtrockz@gmail.com'),

('2', 'Mukesh', 'Kumar', 'B-116, Gali No.12', 'Johripur', 'Delhi', 'New Delhi', '700020', '12345678910', '9874653210', '', 'mukesh.ku@hotmail.com'),

('3', 'Kamal', 'Kishore', 'C-18, Galino.16', 'Matawaligali', 'Lucknow', 'Uttar Pradesh', '302006', '87456123950', '8939109415', '', 'kishore.1965@gmail.com'),

('4', 'Anil', 'Vohra', 'E 48/A25, Jhuggi Indira', 'Nehru Camp', 'Jaipur', 'Rajasthan', '226015', '23456879104', '4563218971', '', 'avohra@yahoo.com'),

('5', 'Rajesh', 'Thapar', '64 Tagore Garden', '', 'Chennai', 'Tamil Nadu', '600027', '56123478908', '1234567890', '', 'rajesh.t.1967@gmail.com'),

('6', 'Vijay', 'Kumar', '73 Rama Market', 'Pritam Village', 'Bangalore', 'Karnataka', '560054', '45698712358', '9874653210', '', 'v.kumar.2019@gmail.com'),

('7', 'Nirmal', 'Singh', 'A2/198, Amar Colony', '', 'Kolkata', 'West Bengal', '226010', '20587419637', '8939109415', '', 'singh.n@gmail.com'),

('8', 'Neetu', 'Malik', 'No. 29, Taimoor Nagar Village ', 'New Friends Colony', 'Pune', 'Maharahstra', '410081', '74185296332', '9854632178', '', 'malik.neetu@gmail.com'),

('9', 'Shabana', 'Begam', 'L-32, Loha Market', 'Welcome', 'Delhi', 'New Delhi', '110032', '85236915965', '8756321498', '', 'begam.s.187@gmail.com'),

('10', 'Lalbabu', 'Devi', 'C-82, Ambedkar Basti', '', 'Chennai', 'Tamil Nadu', '600055', '12365498795', '9654123987', '', 'deviji@yahoo.co.in'),

('11', ' Hari ', 'Shankar', 'No 7, Gautam Nagar', 'Hauz Khas', 'Chennai', 'Tamil Nadu', '600161', '36985201478', '6398741250', '', 'hari.s@yahoo.com'),

('12', 'Shyam', 'Gupta', 'G-437, Inder Enclave', 'Aman Vihar', 'Delhi', 'New Delhi', '110090', '57951984265', '8974156320', '', 'shyamgup@gmail.com'),

('13', 'Anamika', 'Das', 'F Block, Sundar Nagri', 'Kasturi Nagar', 'Bangalore', 'Karnataka', '560181', '14569654420', '7012365491', '', 'a.d.1984@gmail.com'),

('14', 'Arun', 'Chaudhary', '409, Ekta Vihar', '', 'Lucknow', 'Uttar Pradesh', '302011', '93698741250', '9632587416', '', 'arum1532@gmail.com');

Table : Missing Person Information

INSERT INTO `missingpersoninfo` (`ComplaintID`, `FName`, `LName`, `Age`, `Gender`, `AddrLine1`, `AddrLine2`, `City`, `State`, `Pincode`, `LastSeenAddrLine1`, `LastSeenAddrLine2`, `EyeColor`, `Height`, `Weight`, `Relation`, `Photo`, `Description`, `UID`, `primarynumber`, `ClothesDescription`, `SkinColor`, `LastSeenDateTime`) VALUES

('1', 'Hitesh', 'Kumar', 21, 'M', 'T-213, Gali No 1', 'Shivaji Nagar', 'Delhi', 'New Delhi', '110006', 'B-1248, J.J Colony Bawana', '', 'Blue', 6, 60, 'Nephew', 0x3235, '', '6', '4563218971', 'Yellow Shirt and Blue Jeans', 'L Brown', '2013-09-27 00:00:00'),

('2', 'Reeta', 'Singh', 10, 'F', 'H.No-6 /407', 'Trilok Puri', 'Kolkata', 'West Bengal', '226010', 'S- 15/84 J.J Camp ', '', '', 4, 45, 'Daughter', '', 'Last seen playing in the Park', '7', '', '', 'White', '2018-11-23 00:00:00'),

('3', 'Deepak', 'Vohra', 50, 'M', 'Flat No-386,', 'Sanskriti Apartment', 'Jaipur', 'Rajasthan', '226015', 'Flat No-386', 'Sanskriti Apartment', 'Brown', 6, NULL, 'Brother', '', 'Last seen taking a cab to a party', '4', '8939109415', 'Red Kurta and Jeans', 'L Brown', '2015-01-06 00:00:00'),

('4', 'Guddu', 'Thapar', 18, 'M', 'D-565', 'West Vinod Nagar', 'Chennai', 'Tamil Nadu', '600027', 'E-2/149, Nand Nagri ', '', '', 5, 82, 'Son', '', '', '5', '4563218971', '', 'Brown', '2019-10-23 00:00:00'),

('5', 'Ram', 'Tandon', 67, 'M', '216', 'HPCL Appr', 'Mumbai', 'Maharahstra', '400051', '', '', 'Grey', NULL, 60, 'Father', '', '', '1', '', '', 'L Brown', NULL),

('6', 'Alok', 'Kumar', 18, 'M', 'No. 29, Taimoor Nagar Village', 'New Friends Colony', 'Delhi', 'New Delhi', '110020', 'A-459 New Ashok Nagar', '', '', 5, 50, 'Son', '', '', '3', '', '', 'White', NULL),

('7', 'Bhagat', 'Kishore', 25, 'M', 'L-32, Loha Market', 'Welcome', 'Lucknow', 'Uttar Pradesh', '302006', 'BH-421, East Shalimar Bagh', '', '', NULL, 70, 'Brother', '', '', '7', '', '', 'L Brown', NULL),

('8', 'Anu', 'Malik', 44, 'M', 'C-82, Ambedkar Basti', '', 'Pune', 'Maharahstra', '410081', 'No. A1/374, Anand Nagri ', '', 'Brown', NULL, 60, 'Brother', '', '', '8', '', '', 'L Brown', NULL),

('9', 'Fatima', 'Begam', 27, 'F', 'No 7, Gautam Nagar', 'Hauz Khas', 'Delhi', 'New Delhi', '110032', '1/24 G.S.T Road', '', '', 5, NULL, 'Daughter', '', '', '9', '', '', 'L Brown', NULL),

('10', 'Prabha', 'Devi', 69, 'F', 'G-437, Inder Enclave', 'Aman Vihar', 'Chennai', 'Tamil Nadu', '600055', '216/1', '', 'Blue', 5, NULL, 'Mother', '', '', '10', '', '', 'White', NULL),

('11', 'Shiv', 'Shankar', 32, 'M', 'Connaught Circus ', 'Kasturi Nagar', 'Chennai', 'Tamil Nadu', '600161', '1-55 F Near Jaipuria School', '', '', 6, NULL, 'Brother', '', '', '11', '', '', 'L Brown', NULL),

('12', 'Sanket', 'Gupta', 15, 'M', 'C-36 Gulomohar Park', '', 'Delhi', 'New Delhi', '110090', 'Florentine', 'Sopan Baug', 'Brown', 4, NULL, 'Son', '', '', '12', '', '', 'L Brown', '2017-04-01 00:00:00'),

('13', 'Ahesh', 'Narayan', 23, 'M', '', '', 'Bangalore', 'Karnataka', '560181', 'F Block, Sundar Nagri', 'Kasturi Nagar', '', 5, NULL, 'Friend', '', '', '13', '', '', 'Brown', NULL),

('14', 'Priya', 'Bhasin', 19, 'F', '', '', 'Lucknow', 'Uttar Pradesh', '302011', '409, Ekta Vihar', '', 'Grey', 6, NULL, 'Friend', '', '', '14', '', '', 'Brown', '2019-05-26 00:00:00');

Table : Complaint Master

INSERT INTO `complaintmaster` (`ComplaintID`, `FIRID`, `ClosedDate`, `CaseClosed`, `CaseDesc`, `UID`, `PoliceID`, `PoliceDeptID`) VALUES

('1', '2013001', NULL, b'0', 'No Developments Yet', '6', '2', '3'),

('2', '2018052', '2018-12-04', b'1', 'Person found in two weeks in a town near Mohali', '7', '5', '5'),

('3', '20151121', NULL, b'0', 'No Developments Yet', '4', '6', '7'),

('4', '2019009', NULL, b'0', 'No Developments Yet', '5', '8', '2'),

('5', '2016121', '2016-06-30', b'1', 'Victim was killed in a highway accident', '1', '1', '1'),

('6', '2017282', NULL, b'0', 'No Developments Yet', '3', '2', '3'),

('7', '2019565', NULL, b'0', 'No Developments Yet', '7', '7', '8'),

('8', '2014585', '2015-01-02', b'1', 'Person was found in a river bed outside Pune', '8', '3', '6'),

('9', '2013303', '2013-11-15', b'1', 'Person was found a day later ', '9', '2', '3'),

('10', '2014008', NULL, b'0', 'No Developments Yet', '10', '8', '2'),

('11', '2015008', NULL, b'0', 'No Developments Yet', '11', '8', '2'),

('12', '2017001', NULL, b'0', 'No Developments Yet', '12', '2', '3'),

('13', '2016265', '2016-04-06', b'1', 'Person was found at a hotel outside the city', '13', '4', '4'),

('14', '2019085', NULL, b'0', 'No Developments Yet', '14', '7', '8');

VI. Major Data Questions

1. Which officer is assigned to the complaint filed?

>> select c.ComplaintID,c.CaseDesc,c.PoliceID,p.FName,p.LName from complaintmaster as c, policeinfo as p where c.PoliceID=p.PID;

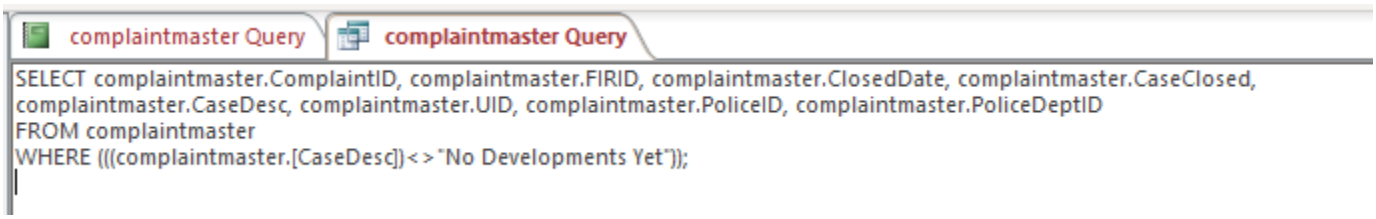
```
mysql> select c.ComplaintID,c.CaseDesc,c.PoliceID,p.FName,p.LName from complaintmaster as c, policeinfo as p where c.PoliceID=p.PID;
+-------------+-------------------------------------------+----------+---------+------------+
| ComplaintID | CaseDesc                                  | PoliceID | FName   | LName      |
+-------------+-------------------------------------------+----------+---------+------------+
| 4           | No Developments Yet                       | 8        | Roshnee | Sundaraman |
| 3           | No Developments Yet                       | 6        | Shreya  | Dixit      |
| 1           | No Developments Yet                       | 2        | Bhavish | Kumar      |
| 2           | Person found in two weeks in a town near Mohali | 5  | Dhrumil | Shah       |
| 7           | No Developments Yet                       | 7        | Zainab  | Merchant   |
| 6           | No Developments Yet                       | 2        | Bhavish | Kumar      |
| 5           | Victim was killed in a highway accident   | 1        | Laxman  | Kumar      |
| 8           | Person was found in a river bed outside Pune | 3     | Prankur | Garg       |
| 9           | Person was found a day later              | 2        | Bhavish | Kumar      |
| 10          | No Developments Yet                       | 8        | Roshnee | Sundaraman |
| 11          | No Developments Yet                       | 8        | Roshnee | Sundaraman |
| 12          | No Developments Yet                       | 2        | Bhavish | Kumar      |
| 13          | Person was found at a hotel outside the city | 4     | Pranav  | Radha      |
| 14          | No Developments Yet                       | 7        | Zainab  | Merchant   |
+-------------+-------------------------------------------+----------+---------+------------+
14 rows in set (0.06 sec)
```

2. Whether the search operation is carried out or not?

>> select * from complaintmaster where CaseDesc!="No Developments Yet";

```
mysql> select * from complaintmaster where CaseDesc!="No Developments Yet";
+-------------+---------+------------+------------+-------------------------------------------+-----+----------+--------------+
| ComplaintID | FIRID   | ClosedDate | CaseClosed | CaseDesc                                  | UID | PoliceID | PoliceDeptID |
+-------------+---------+------------+------------+-------------------------------------------+-----+----------+--------------+
| 2           | 2018052 | 2018-12-04 |            | Person found in two weeks in a town near Mohali | 7 | 5        | 5            |
| 5           | 2016121 | 2016-06-30 |            | Victim was killed in a highway accident   | 1   | 1        | 1            |
| 8           | 2014585 | 2015-01-02 |            | Person was found in a river bed outside Pune | 8 | 3        | 6            |
| 9           | 2013303 | 2013-11-15 |            | Person was found a day later              | 9   | 2        | 3            |
| 13          | 2016265 | 2016-04-06 |            | Person was found at a hotel outside the city | 13 | 4        | 4            |
+-------------+---------+------------+------------+-------------------------------------------+-----+----------+--------------+
5 rows in set (0.00 sec)
```

Query for report generation



3. Which department has the largest pending missing complaint?

>> select c.PoliceDeptID,p.DepartmentName,count(c.PoliceDeptID) as "Count" from complaintmaster as c join policedepartment as p on c.PoliceDeptID=p.PDID where c.CaseClosed=0 group by c.PoliceDeptID order by count(c.PoliceDeptID) desc;

```
mysql> select c.PoliceDeptID,p.DepartmentName,count(c.PoliceDeptID) as "Count" from complaintm
aster as c join policedepartment as p on c.PoliceDeptID=p.PDID where c.CaseClosed=0 group by c
.PoliceDeptID order by count(c.PoliceDeptID) desc;
+--------------+------------------+-------+
| PoliceDeptID | DepartmentName   | Count |
+--------------+------------------+-------+
| 2            | Chennai Police   |     3 |
| 3            | Delhi Police     |     3 |
| 8            | Lucknow Police   |     2 |
| 7            | Rajasthan Police |     1 |
+--------------+------------------+-------+
4 rows in set (0.00 sec)
```

4. How many missing people are reported, by city and state?

>>select city,count(ComplaintID) from missingpersoninfo group by city;

```
mysql> select city,count(ComplaintID) from missingpersoninfo group by city;
+-----------+--------------------+
| city      | count(ComplaintID) |
+-----------+--------------------+
| Bangalore |                  1 |
| Chennai   |                  3 |
| Delhi     |                  4 |
| Jaipur    |                  1 |
| Kolkata   |                  1 |
| Lucknow   |                  2 |
| Mumbai    |                  1 |
| Pune      |                  1 |
+-----------+--------------------+
8 rows in set (0.00 sec)
```

>>select state,count(ComplaintID) from missingpersoninfo group by state;

```
mysql> select state,count(ComplaintID) from missingpersoninfo group by state;
+---------------+--------------------+
| state         | count(ComplaintID) |
+---------------+--------------------+
| Karnataka     |                  1 |
| Maharahstra   |                  2 |
| New Delhi     |                  4 |
| Rajasthan     |                  1 |
| Tamil Nadu    |                  3 |
| Uttar Pradesh |                  2 |
| West Bengal   |                  1 |
+---------------+--------------------+
7 rows in set (0.00 sec)
```

5. Which police department has the highest case solving rate?

>> select p.PDID,p.DepartmentName, ((select count(d.PoliceID) from policedepartment as t, complaintmaster as d where d.PoliceDeptID=t.PDID and d.PoliceDeptID=c.PoliceDeptID and d.CaseClosed=1 group by d.PoliceDeptID)/count(c.PoliceDeptID)) as “Case Solving Rate” from policedepartment as p, complaintmaster as c where c.PoliceDeptID=p.PDID group by c.PoliceDeptID

```
mysql> select p.PDID,p.DepartmentName, ((select count(d.PoliceID) from policedepartment as t, complain
tmaster as d where d.PoliceDeptID=t.PDID and d.PoliceDeptID=c.PoliceDeptID and d.CaseClosed=1 group by
 d.PoliceDeptID)/count(c.PoliceDeptID))  as "Case Solving Rate" from policedepartment as p, complaintm
aster as c where c.PoliceDeptID=p.PDID  group by c.PoliceDeptID;
+------+-----------------+-------------------+
| PDID | DepartmentName  | Case Solving Rate |
+------+-----------------+-------------------+
| 1    | Mumbai Police   |            1.0000 |
| 2    | Chennai Police  |            0.2500 |
| 3    | Delhi Police    |            0.2500 |
| 4    | Bangalore Police|            1.0000 |
| 5    | Kolkata Police  |            1.0000 |
| 6    | Pune Police     |            1.0000 |
| 7    | Rajasthan Police|              NULL |
| 8    | Lucknow Police  |              NULL |
+------+-----------------+-------------------+
8 rows in set (0.00 sec)
```

VII. Interface

1. *Forms*

- **Police Designation From**

Figure 1: Add Record

Figure 2: Edit Record

- **Police Department From**

Figure 3: Add Record

Figure 4: Edit Record

- **Police Information From**

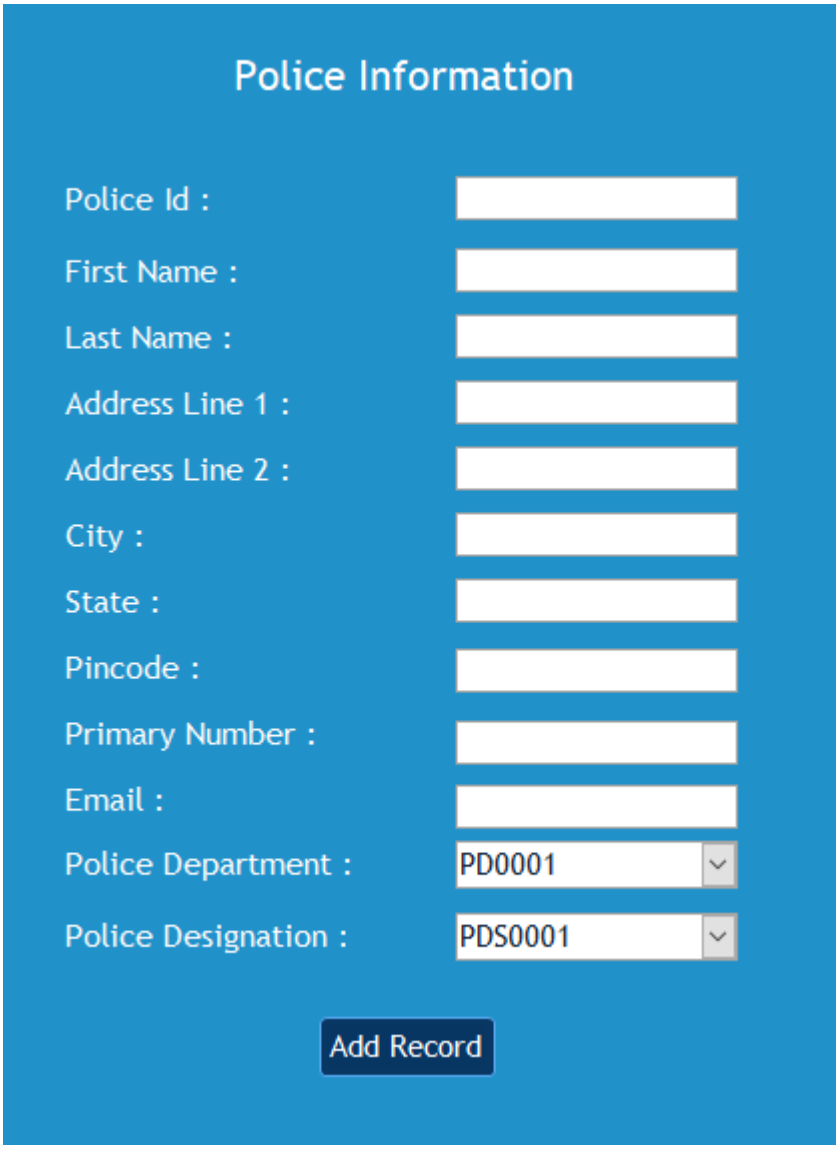


Figure 5: Add Record

Figure 6: Edit Record

- **Registered User From**

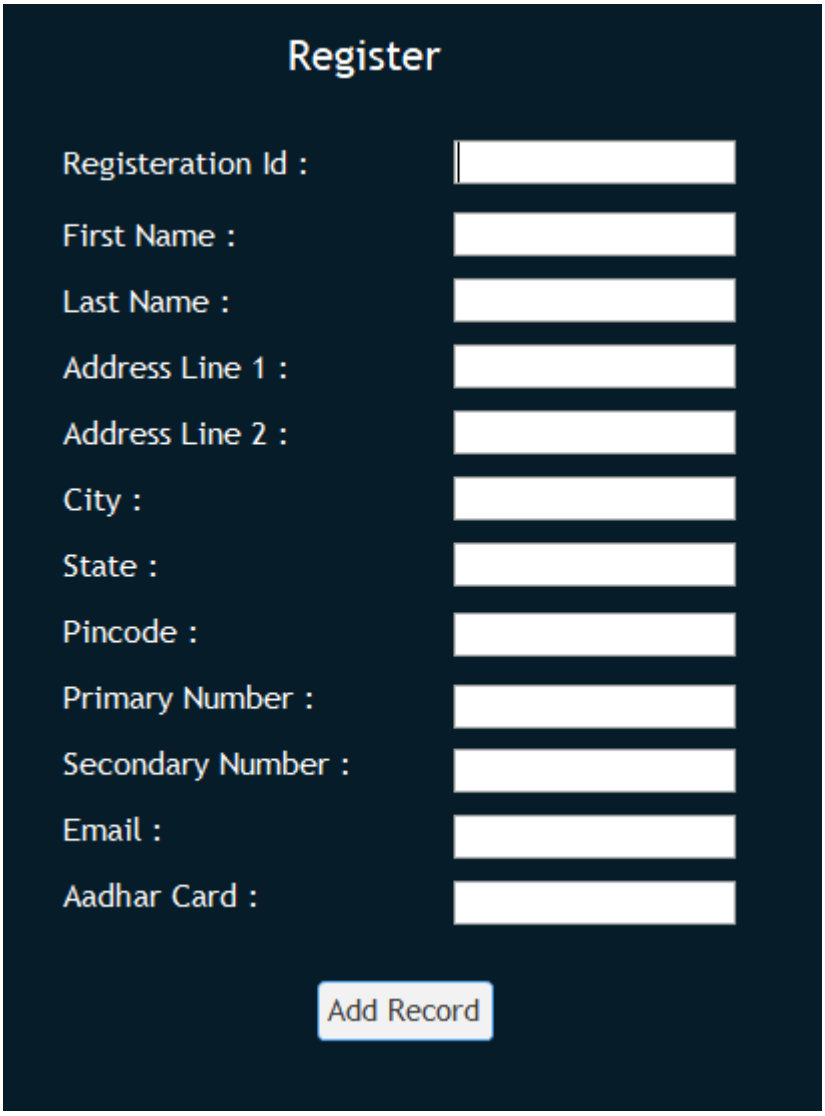


Figure 7: Add Record

Figure 8: Edit Record

- **Mission Person's Information From**

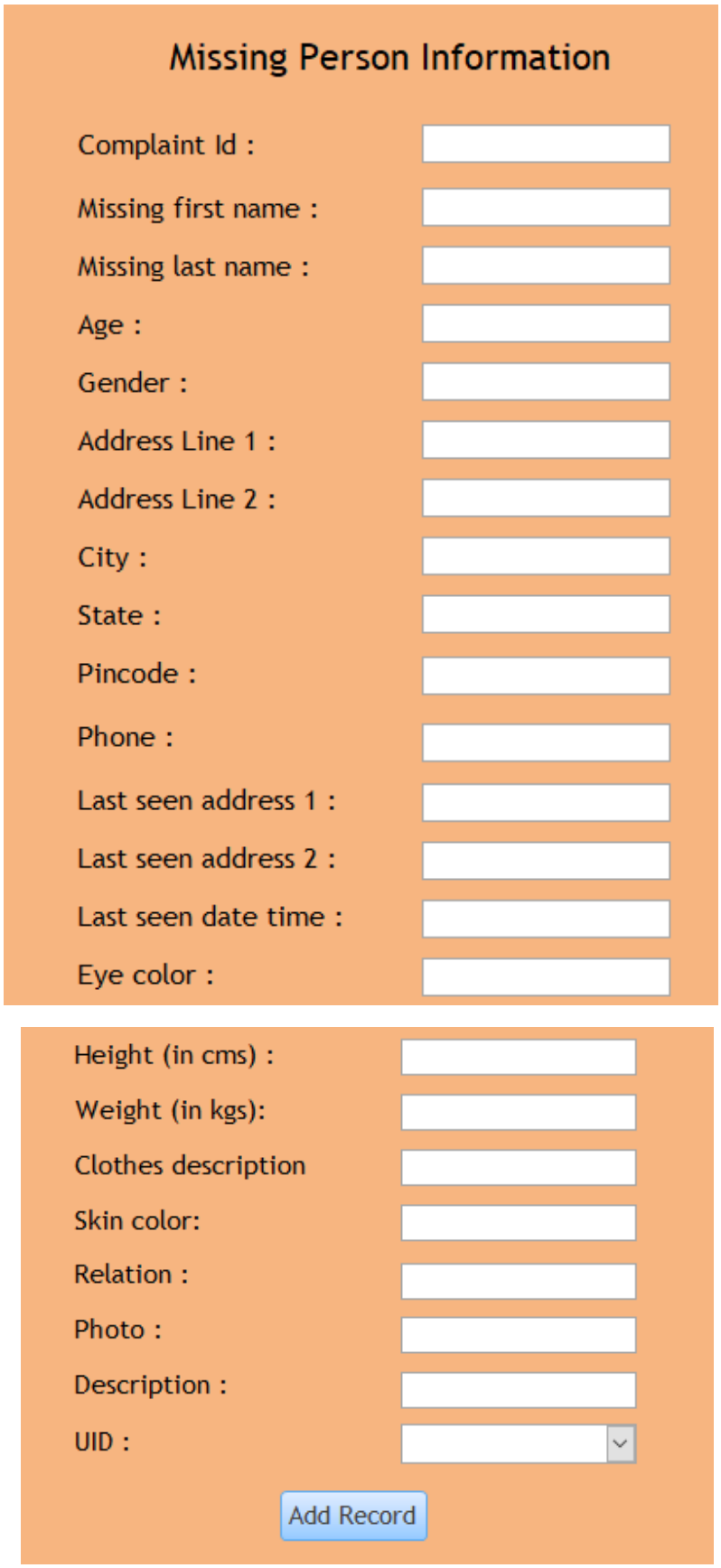


Figure 9:Add Record

- **Complaint Master Form**

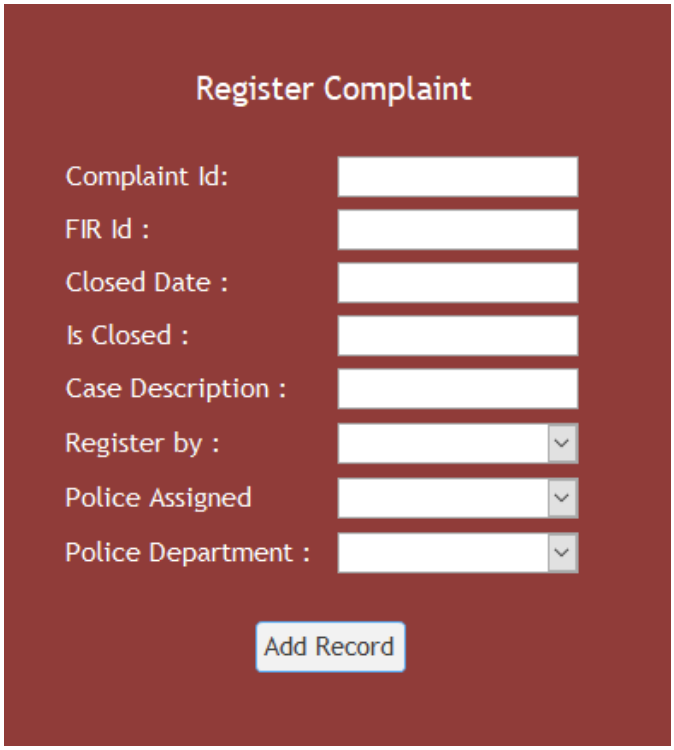


Figure 10: Add Record

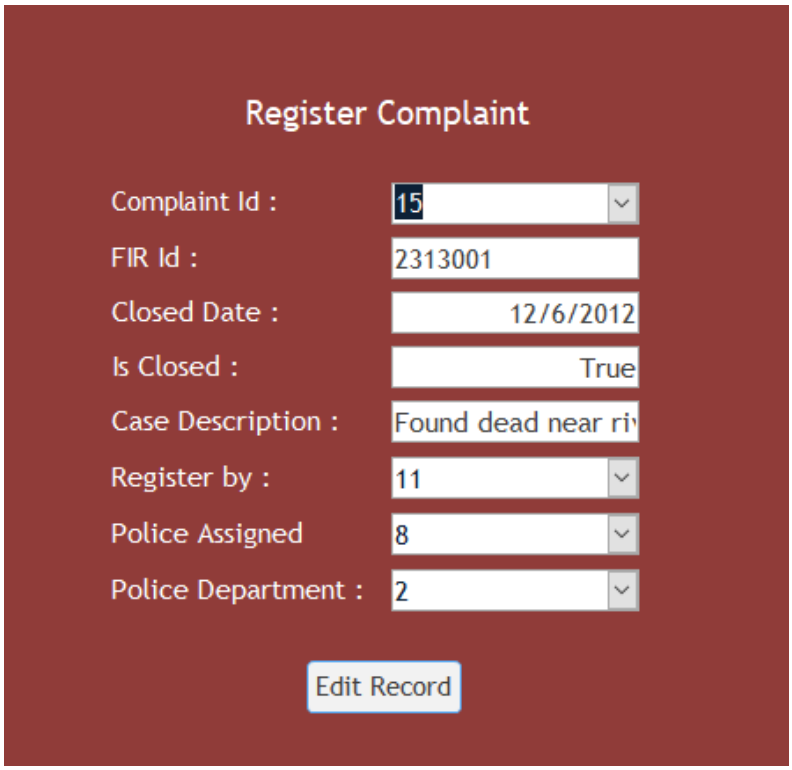


Figure 11: Edit Record

2. *Hybrid Mobile App*

Flutter is used to create hybrid mobile application. Flutter is a cross platform mobile application development framework. We have developed user interface as the application since the users are most likely to use portable devices. Due to unavailability to find API to establish communication between NOSQL database and MYSQL database we were unable to finish the project on time.

Figure 12: Dashboard

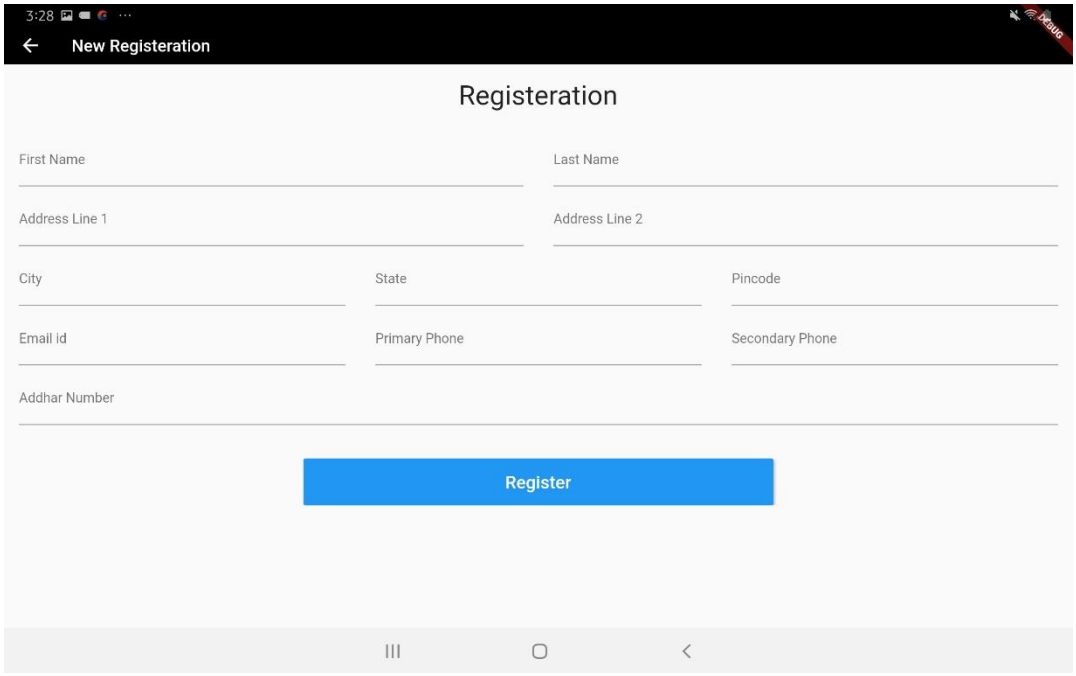


Figure 13: Registration Page

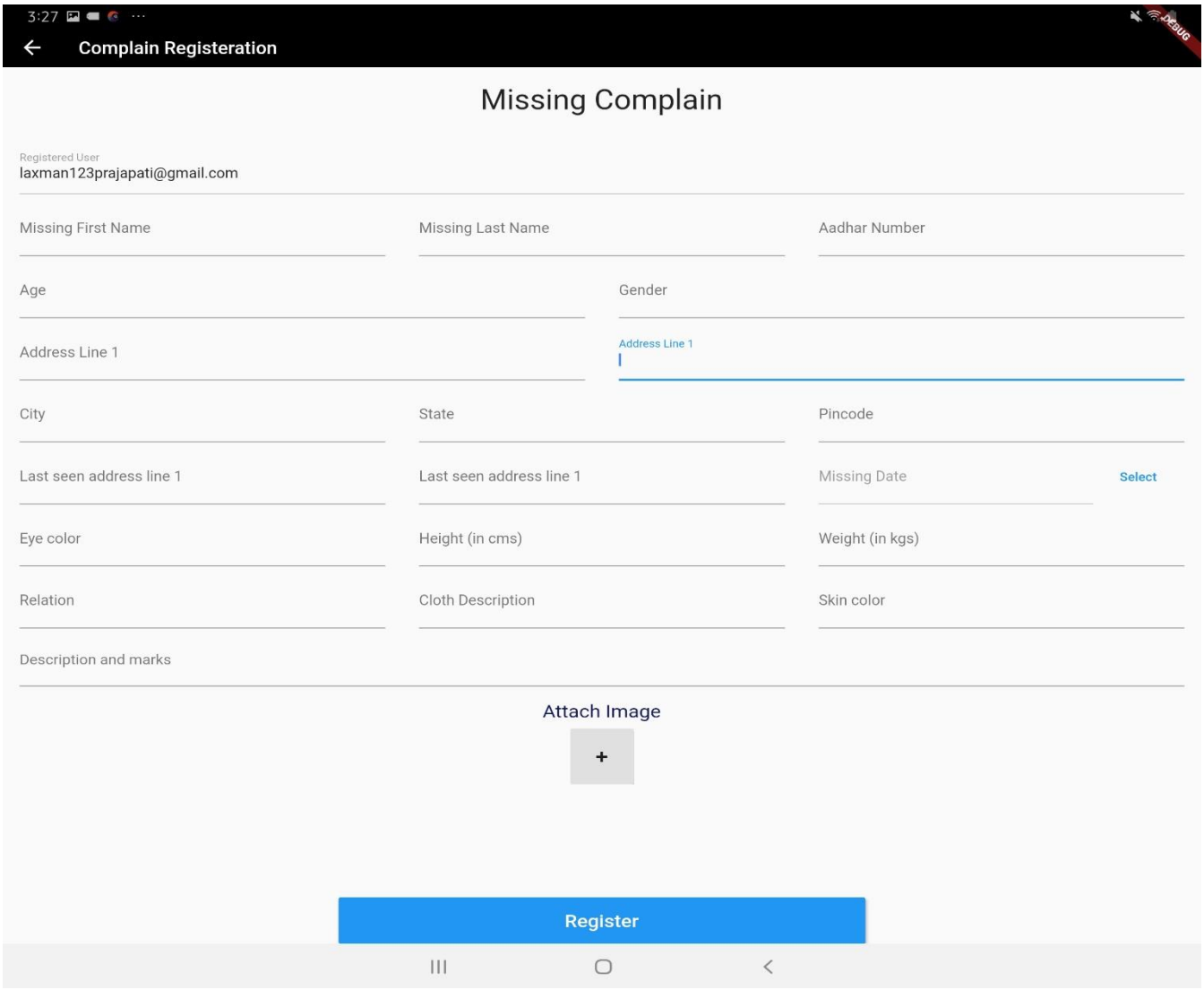


Figure 14: Complaint Page

3. *Reports*

- **Data Question 1: Which officer is assigned to the complaint filed?**

Officer assigned to the complaint filed

ComplaintID	FIRID	CaseDesc	PoliceID	FName	LName
1	2013001	No Developments Yet	2	Bhavish	Kumar
10	2014008	No Developments Yet	8	Roshnee	Sundaraman
11	2015008	No Developments Yet	8	Roshnee	Sundaraman
12	2017001	No Developments Yet	2	Bhavish	Kumar
13	2016265	Person was found at a hotel c	4	Pranav	Radha
14	2019085	No Developments Yet	7	Zainab	Merchant
2	2018052	Person found in two weeks in	5	Dhrumil	Shah
3	20151121	No Developments Yet	6	Shreya	Dixit
4	2019009	No Developments Yet	8	Roshnee	Sundaraman
5	2016121	Victim was killed in a highwa	1	Laxman	Kumar
6	2017282	No Developments Yet	2	Bhavish	Kumar
7	2019565	No Developments Yet	7	Zainab	Merchant
8	2014585	Person was found in a river b	3	Prankur	Garg
9	2013303	Person was found a day later	2	Bhavish	Kumar

- **Data Question 2: Whether the search operation is carried out or not?**

Cases in which operation has caried out

ComplaintID	FIRID	ClosedDate	CaseClosed	CaseDesc	UID	PoliceID	PoliceDep
2	2018052	12/4/2018	True	Person found in two weeks	7	5	5
5	2016121	6/30/2016	True	Victim was killed in a high	1	1	1
8	2014585	1/2/2015	True	Person was found in a rive	8	3	6
9	2013303	11/15/2013	True	Person was found a day lat	9	2	3
13	2016265	4/6/2016	True	Person was found at a hot	13	4	4

- **Data Question 3: Which officer is assigned to the complaint filed?**

Total missing people cases grouped by department

PoliceDeptID	DepartmentName	"Count"
2	Chennai Police	3
3	Delhi Police	3
8	Lucknow Police	2
7	Rajasthan Police	1

Wednesday, December 4, 2019 Page 1 of 1

- **Data Question 4: How many missing people are reported, by city and state?**

Total missing cases by state

state	Count
Karnataka	1
Maharahstra	2
New Delhi	4
Rajasthan	1
Tamil Nadu	3
Uttar Pradesh	2
West Bengal	1

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Total missing cases by city

city	Count
Bangalore	1
Chennai	3
Delhi	4
Jaipur	1
Kolkata	1
Lucknow	2
Mumbai	1
Pune	1

Wednesday, December 4, 2019

- **Data Question 5: Which police department has the highest case solving rate?**

Report1 | Q5

```
SELECT p.PDID, p.DepartmentName, ((select count(d.PoliceID) from policedepartment as t, complaintmaster as d where d.PoliceDeptID=t.PDID
and d.PoliceDeptID=c.PoliceDeptID and d.CaseClosed=1 group by d.PoliceDeptID)/Count(c.PoliceDeptID)) AS "CaseSolvingRate"
FROM policedepartment AS p, complaintmaster AS c
WHERE (((c.PoliceDeptID)=[p].[PDID]))
GROUP BY p.PDID, p.DepartmentName, c.PoliceDeptID;
```

Q5 | Report1 | q4_partb

PDID	DepartmentNam	"CaseSolvin
1	Mumbai Police	1
2	Chennai Police	0.25
3	Delhi Police	0.25
4	Bangalore Police	1
5	Kolkata Police	1
6	Pune Police	1
7	Rajasthan Police	
8	Lucknow Police	