**CRIME RECORD MANAGEMENT SYSTEM**



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**PROJECT REPORT**

**Of**

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**Introduction**

Police provides safety to citizens. It always remains steady for arresting any criminal who is a threat for the safety of society. After registering the FIR from any citizen, police starts its work and on that basis it arrests the criminals if proofs are found against them. Once the criminals are arrested, police starts investigation from them. After getting all the proofs against the criminal, it is the duty of the police to present all the proofs honestly to the court so that the right man can get right punishment. The true and right information provided by the people to police helps a lot in arresting the criminals who try to spoil the peaceful environment of society.

Along with low salary scale, facilities of modern technology such as computerized system of keeping records are not provided to police department which causes low efficiency. As it is the age of computers and all the organizations today use computers to maintain their records, so this facility should also be given to police department in order to increase their efficiency and to save their time.

In our Project we are going to implement a CRMS (Criminal Record Management System). This is a database system in which police will keep the record of Criminals who have been arrested, to be arrested or escaped. This will help the Police department to manage their records easily. In police

system when an incident occurs, a Petitioner reports an FIR (First Information Report). Police starts investigation according to law on this FIR. An investigation Officer supervises the investigation process. The main concerning people in the whole process are Petitioner (The person who files an FIR), Victim, Accused/Criminal, investigation officer.

CRMS will keep the record of following entities:

ENTITIES

These are the entities of CRMS.

1. Petitioner

2. Victim

3. Accused

4. FIR

5. Case

6. Investigation Officer

**Petitioner:**

A person who is seeking legal help from police station or he has some problem or complaints regarding the matters under the jurisdiction of police. Petitioner may or may not be the victim of offense.

**Victim:**

**"Victim"** means an individual who suffers, in relation to an offence.

**FIR:**

First Information Report (FIR) is a written document prepared by the

police when they receive information from the Petitioner about the commission of a cognizable offence.

**Accused:**

**"Accused"** means a person who is charged with an offence or crime.

**Case:**

**Case** is the issue to be investigated by the police and resolved by the

court.

**Investigation officer:**

**“Investigation officer”** is the police officer who investigates the case. There may be more than one investigation officers in one police station.

**ATTRIBUTES OF ENTITIES**

**Petitioner: Definition:**

A person who is seeking legal help from police station or he has some problem or complaints regarding the matters under the jurisdiction of police. Anyone who knows about the commission of a cognizable offence can file an FIR. It is not necessary that only the victim of the crime should file an FIR.

A police officer who comes to know about a cognizable offence can file an FIR Himself/herself.

You can file an FIR if:

1. You are the person against whom the offence has been committed

2. You know yourself about an offence which has been committed

3. You have seen the offence being committed.

**Attributes:**

The Petitioner has the following attributes

**Name:**

The full name of Petitioner.

**Father\_name:**

The father name of Petitioner.

**Address:**

Address of Petitioner**.**

**Contact:**

Contact number of Petitioner**.**

**NIC:**

National identity card number of Petitioner**.**

**Identifier: NIC+NAME:**

Since NIC number is the only attribute of a Petitioner which is unique and no Petitioner can file FIR without NIC due to which it can never be an unknown value (null value) but it can be duplicate in fraudulent cases so we take NIC and NAME as an identifier.

**Definition:**

Every criminal case has an investigation officer who finds and examines the nature of the case, witnesses and evidences to find the criminal.

**Attributes:**

The investigation officer has the following attributes

**Name:**

The full name of the investigation officer.

**Officer ID:**

Every police officer has got some ID so the code or ID of investigation officer is another attribute.

**Rank:**

The rank of an investigation officer.

**Identifier: Officer ID:**

As every police officer has a unique ID so we can take officer ID as an identifier.

**Definition:**

A file in which daily detail of a case are written down by the investigating officer

The police may not investigate a complaint even if you file a FIR, when: (i) The case is not serious in nature;

(ii) The police feel that there is not enough ground to investigate. However, the police must record the reasons for not conducting an investigation and in the latter case must also inform you.

**Attributes: Case ID:**

Each case is assigned an ID.

**Section\_of\_law :**

Through section of law we can find a lot about nature of the case E.g. the criminal act and its sentence accordingly.

**Case Status:**

It’s another attribute of entity case, through which we can find whether the case is closed or open.

**Case detail:**

The detail of the case is written here.

**Identifier: Case ID:**

Since each case has its own unique identifier which is it’s ID so we take case ID as an identifier, which can never be an unknown value.

**Accused:**

**Definition:**

Accused is the person who commits a crime. It is the most important entity in our DB because our whole project is based upon this entity. So that’s why is also related to most of the entities. And also we are concerned with most of its attributes to watch an accused as easily as possible.

**Attributes:**

**Accused\_ID:**

It is assigned by the police department whenever a perosn either guilty or not suffers from police investigation or in any sort of procedures remains unique for the whole life

**Name:**

In this attribute the name against an accused id is entered.

**Father\_Name:**

In this attribute the Father’s name against an accused id is entered.

**NIC:**

If the NIC of accused is known then it is saved in this attribute.

**Gender:**

Gender of accused.

**Age:**

The age of accused is entered in this attribute.

**Status:**

The status of accused is entered like either he is

**Arrested,Escaped,Bailed or Released.**

**Contact:**

It is composite attribute. In this attribute we list the mobile number or land line number and email address of the accused.

It is composed of following attributes

**Phone:**

The phone number of the accused. It is multivalued attribute because an accused can have more than one contact numbers.

**Email:**

The email id of the accused.

**Photo:**

The picture identity of the accused.

**Identifier:**

**Accused\_ID:**

Accused ID is the sole identifier for accused because all other attributed becomes multivalued in case of dangerous criminals whose identity is not confirmed. Once accused id is assigned to a criminal then we start filing other available attributes.

**FIR:**

**Definition:**

**First Information Report (FIR)** is a written document prepared by the police when they receive information about the commission of a cognizable offence. It is a report of information that reaches the police first in point of time and that is why it is called the First Information Report.

It is generally a complaint lodged with the police by the victim of a cognizable offence or by someone on his/her behalf. Anyone can report the commission of a cognizable offence either orally or in writing to the police. Even a telephonic

message can be treated as an FIR.

**Importance of FIR**

An FIR is a very important document as it sets the process of criminal justice in motion. It is only after the FIR is registered in the police station that the police take up investigation of the case.

**Attributes:**

**FIR\_ID:**

Once FIR is longed against any sort of complaint an ID is assigned to it.

**Date\_lodged:**

The date on which FIR is lodged.

**Time\_lodged:**

The time of FIR being lodged.

**Detail:**

The detail of an FIR consists of following attributes.

**Incident Place:**

The place on which complained incident took place.

**Incident Date:**

The date on which complained incident took place.

**Incident Time:**

The time on which complained incident took place.

**Identifier:**

**FIR\_ID:**

FIR ID is identifier of an FIR because it is kept in record of police department filing that specific FIR against a compliant. So a specific ID will always toward the unique incident.

**Victim:**

Victim is a person is a person which is affected by any sort of activity by the accused. He might be dead or alive due to the crime committed.

**Attributes:**

**Name:**

The name of the victim is entered in this attribute.

**Father\_Name:**

Father name of accused person.

**Address:**

The address of the victim is entered in this attribute.

**Contact:**

The contact information of the accused is entered in this attribute like phone# etc.

**Identifier:**

**Name +Address:**

One name can exist on more than one address, but it is not possible that two persons with same name have same address.

**RELATIONSHIPS BETWEEN ENTITIES**

**Petitioner and FIR**

➢ Petitioner files an FIR

➢ There is **one-to-many** relationship between Petitioner and FIR

because

➢ One Petitioner can file more than one FIRs.

➢ But one FIR is filed by one and only one Petitioner.

➢ It is not possible that an FIR is lodged by unknown Petitioner.

➢ Hence we conclude that **cardinality of Petitioner is mandatory**

**one**.

➢ According to the definition of Petitioner it is necessary for a person to be a Petitioner that he/she must file at least one FIR.

➢ Hence the **cardinality of FIR is mandatory-many**.

**Accused and FIR**

➢ FIR is lodged or filed against accused

➢ One FIR can be lodged against more than one accused

➢ One FIR can be lodged against unknown accused or criminal

➢ Similarly there may be more than one FIRs against one accused but

one accused will have at least one FIR against him.

➢ In this relationship cardinality of **FIR is mandatory-one**

➢ and cardinality of **accused is optional-many**

**FIR and Victim**

➢ FIR is filed by Petitioner for a victim who is suffered from offence.

➢ There can be one or many victims for one FIR.

➢ There is one and only one FIR for a victim.

➢ Cardinality of FIR is **mandatory one**.

➢ Cardinality of victim is **one-many**.

➢ FIR initiates a Case

**FIR and Case**

➢ Case is dependent on FIR.

➢ When a Petitioner files an FIR, the Police analyze the report whether it

is a valid report and needs a case to be initiated or the issue would be solved without filing a case.

➢ The police may not investigate a complaint even if you file a FIR, when:

➢ The case is not serious in nature;

➢ The police feel that there is not enough ground to investigate.

➢ The police must record the reasons for not conducting an investigation

and in the latter case must also inform you.

➢ If the complaint is a crime according to Law, then a case is initiated.

➢ Either one or no case can be initiated (filed) on one FIR.

➢ Cardinality of FIR is **mandatory one**.

➢ Cardinality of case is **optional one**.

**Investigation Officer and Case**

➢ Investigation officer investigates the case

➢ Investigation officer must investigate at least one case

➢ Investigation officer may investigate more than one case at the same

time

➢ A case is investigated by one and only officer

➢ Hence the **cardinality of investigation officer is mandatory-one**

➢ And **cardinality of case is mandatory many**

**NORMALIZATION**

**First Normal Form**

All the tables in relational model are in 1NF because they fulfill the definition of **relation.** i.e there are no multi-valued attributes

**Second Normal Form**

**Investigation Officer:**

Name and Rank can be determined by officer\_id (primary key) Officer\_ID -> Name , Rank

This implies that there is no partial functional dependency in this relation. Hence

The relation “Investigation\_officer” is in 2nd Normal Form

**Officer\_ID Name Rank**

**Case:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Case \_ID** | **Case\_statu s** | **Case\_Descri ption** | **Section\_of\_l aw** | **FIR\_I D** | **Officer**  **\_ID** |

Case\_ID è Case\_status , Case\_Description, Section\_of\_law

No partial functional dependency

“Case” is in 2nd Normal Form

**Petitioner:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NIC** | **Name** | **Father\_name** | **Address** | **Contact** |

NIC +Name -> Name,Father\_name,Address,Contact

Only NIC cannot be determinant because fraud cases can cause duplicate NIC values

No Partial functional dependency

Relation “Petitioner” is in 2nd Normal Form

**Victim:**

Father\_name and contact can be determined exactly if name and address both are known because name is not unique similarly address is also not unique but name+address collectively is unique

Hence there is no partial functional dependency

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Address** | **Father\_name** | **Contact** |

**FIR:**

FIR\_ID è Date\_lodged , Time\_lodged ,Incident\_place, incident\_date

No Partial functional dependency

Relation “FIR” is in 2nd Normal Form

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Complainant**  **\_ID** | **Date\_lodged** | **Time\_lodged** | **Incident\_time** | **Incident\_Place** | **Incident\_d ate** | **FIR\_I D** |

**Accused:**

Accused\_IDèName,father\_name,status,gender,age,nic,email

No Partial functional dependency

Relation “Accused” is in 2nd Normal Form

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Father**  **name** | **Status** | **Age** | **Gender** | **NI C** | **email** | **Photo** |  | **Accused**  **ID** | FIR ID |  |
|  |

Above three relations Accused\_Address, Accused\_Alias, Accused\_Contact are in 2nd normal form.

**Third Normal Form**

In the relation “Accused” NIC seems to be the possible determinant for the Name , Address , Fathers\_name , Gender and Age of the accused but the problem is that it is an optional attribute that its value can be null(unknown) because mostly accused NIC# is not known for several reasons. So there is no transitive dependency here and our relation is in 3NF.

All the other relations are in 3NF because there are no transitive dependencies.

**DATA DICTIONARY**

PLATFORM USED :-

* VISUAL BASIC 6.0
* ORACLE 11G

REFERENCE :-

* **www.w3schools.com**
* **www.tutorialspoint.com**

CONCLUSION::-

We have successfully implemented a Project on CRMS (Criminal Record Management System). This is a database system in which police will keep the record of Criminals who have been arrested, to be arrested or escaped. This will help the Police department to manage their records easily. In police

system when an incident occurs, a Petitioner reports an FIR (First Information Report). Police starts investigation according to law on this FIR. An investigation Officer supervises the investigation process. The main concerning people in the whole process are Petitioner (The person who files an FIR), Victim, Accused/Criminal, investigation officer.