



PES UNIVERSITY, BANGALORE
Department of Computer Science and Engineering

B.TECH. (CSE)
IV, VIII
SEMESTER
UE20CS301 – Database Management Systems (Minors)
Mini-Project Report
on
Title-Police Management System

SUBMITTED BY

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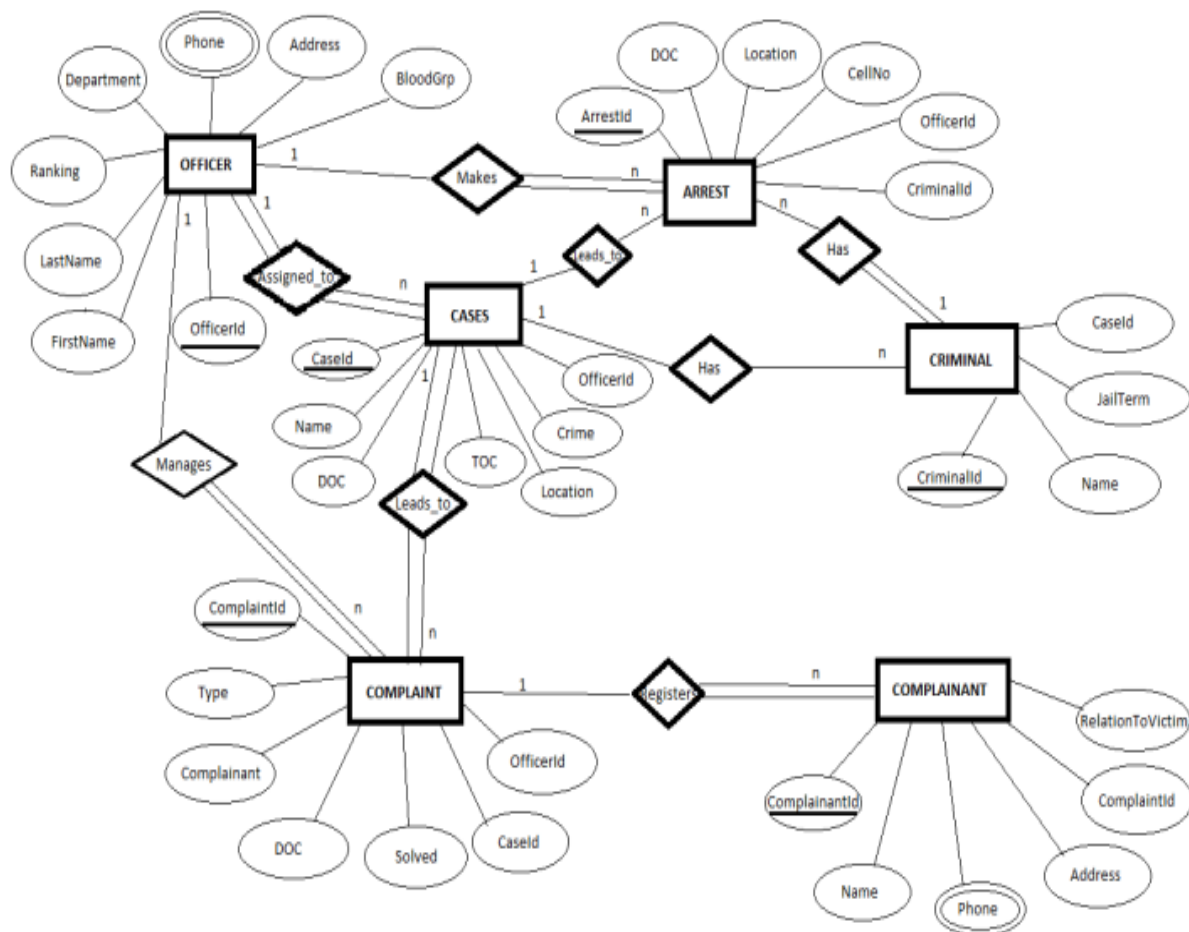


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PROBLEM STATEMENT(SYNOPSIS)

This project deals with creation of a database of the police management system. It has information about-Officers, cases, complaints, complainants, arrests and criminals. Tables have been formed on each and the ER diagram establishes the relationship between the entities and attributes. The project also demonstrates the performance of certain operations like create, select, delete, update, read, trigger, store and many more. We have used github and xampp to execute the same. There are screenshots of the table after performing each operation along with the sql query command for the same.

ER DIAGRAM





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RELATIONAL SCHEMA

OFFICER

<u>OfficerId</u>	FirstName	LastName	Ranking	Department	Phone	Address	BloodGrp
------------------	-----------	----------	---------	------------	-------	---------	----------

CASES

<u>CasId</u>	Name	DOC	TOC	Location	CRIME	OfficerId
--------------	------	-----	-----	----------	-------	-----------

COMPLAINT

<u>ComplaintId</u>	Type	Complainant	DOC	Solved	CasId	OfficerId
--------------------	------	-------------	-----	--------	-------	-----------

COMPLAINANT

<u>ComplainantId</u>	Name	Phone	Address	ComplaintId	RelationToVictim
----------------------	------	-------	---------	-------------	------------------

CRIMINAL

<u>CriminalId</u>	Name	JailTerm	CasId
-------------------	------	----------	-------

ARREST

<u>ArrestId</u>	DOC	Location	CellNo	OfficerId	CriminalId
-----------------	-----	----------	--------	-----------	------------



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INDIVIDUAL CONTRIBUTION OF EACH TEAM MEMBER

1. Vighnesh- ER diagram and Relational Schema
2. Krishna- Create, Insert, Select, Making of report.
3. Sanraj- Update, delete operations in CRUD. Creating trigger and function.
4. Adithya- Setting up streamlit. Create and Read operations in CRUD. Debugging Update function. Creating triggers and function.



OPERATIONS ON THE DATABASE WITH SCREENSHOTS

(i)CREATE

This operation involves creating 6 tables titled officer,cases,complainant,complaint,arrest and criminal

1.officer

```
CREATE TABLE `officer` (  
  `OfficerId` varchar(20) NOT NULL,  
  `FirstName` text DEFAULT NULL,  
  `LastName` text DEFAULT NULL,  
  `Ranking` text DEFAULT NULL,  
  `Department` text DEFAULT NULL,  
  `Phone` text DEFAULT NULL,  
  `Address` text DEFAULT NULL,  
  `BloodGrp` text DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
CREATE TABLE `officer` (  
  `OfficerId` varchar(20) NOT NULL, `FirstName` text DEFAULT NULL, `LastName` text DEFAULT NULL, `Ranking` text  
  DEFAULT NULL, `Department` text DEFAULT NULL, `Phone` text DEFAULT NULL, `Address` text DEFAULT NULL, `BloodGrp` text  
  DEFAULT NULL )  
ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

Output

OfficerId	FirstName	LastName	Ranking	Department	Phone	Address	BloodGrp
-----------	-----------	----------	---------	------------	-------	---------	----------

2.cases

```
CREATE TABLE `cases` (  
  `CaseId` varchar(20) NOT NULL,  
  `Name` text DEFAULT NULL,  
  `DOC` date DEFAULT NULL,  
  `Location` text DEFAULT NULL,  
  `CRIME` text DEFAULT NULL,  
  `OfficerId` varchar(20) DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
CREATE TABLE `cases` (  
  `CaseId` varchar(20) NOT NULL, `Name` text DEFAULT NULL, `DOC` date DEFAULT NULL, `Location` text DEFAULT NULL,  
  `CRIME` text DEFAULT NULL, `OfficerId` varchar(20) DEFAULT NULL ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

Output

CaseId	Name	DOC	Location	CRIME	OfficerId
--------	------	-----	----------	-------	-----------



3.complaint

```
CREATE TABLE `complaint` (  
  `ComplaintId` varchar(20) NOT NULL,  
  `Type` text DEFAULT NULL,  
  `Complainant` text DEFAULT NULL,  
  `DOC` date DEFAULT NULL,  
  `Solved` text DEFAULT NULL,  
  `CaseId` varchar(20) DEFAULT NULL,  
  `OfficerId` varchar(20) DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
CREATE TABLE `complaint` (  
  `ComplaintId` varchar(20) NOT NULL, `Type` text DEFAULT NULL, `Complainant` text DEFAULT NULL, `DOC` date DEFAULT  
  NULL, `Solved` text DEFAULT NULL, `CaseId` varchar(20) DEFAULT NULL, `OfficerId` varchar(20) DEFAULT NULL ) ENGINE=InnoDB  
  CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

output

ComplaintId	Type	Complainant	DOC	Solved	CaseId	OfficerId
-------------	------	-------------	-----	--------	--------	-----------

4.Complainant

```
CREATE TABLE `complainant` (  
  `ComplainantId` varchar(20) NOT NULL,  
  `Name` text DEFAULT NULL,  
  `Phone` text DEFAULT NULL,  
  `Address` text DEFAULT NULL,  
  `ComplaintId` varchar(20) DEFAULT NULL,  
  `RelationToVictim` text DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
CREATE TABLE `complainant` (  
  `ComplainantId` varchar(20) NOT NULL, `Name` text DEFAULT NULL, `Phone` text DEFAULT NULL, `Address` text  
  DEFAULT NULL, `ComplaintId` varchar(20) DEFAULT NULL, `RelationToVictim` text DEFAULT NULL ) ENGINE=InnoDB  
  CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

Output

ComplainantId	Name	Phone	Address	ComplaintId	RelationToVictim
---------------	------	-------	---------	-------------	------------------



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5.Arrest

```
CREATE TABLE `arrest` (  
  `ArrestId` varchar(20) NOT NULL,  
  `DOC` date DEFAULT NULL,  
  `Location` text DEFAULT NULL,  
  `CellNo` text DEFAULT NULL,  
  `OfficerId` varchar(20) DEFAULT NULL,  
  `CriminalId` varchar(20) DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
CREATE TABLE `arrest` ( `ArrestId` varchar(20) NOT NULL, `DOC` date DEFAULT NULL, `Location` text DEFAULT NULL, `CellNo` text DEFAULT NULL,  
`OfficerId` varchar(20) DEFAULT NULL, `CriminalId` varchar(20) DEFAULT NULL ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4  
COLLATE=utf8mb4_general_ci;
```

Output

ArrestId	DOC	Location	CellNo	OfficerId	CriminalId
----------	-----	----------	--------	-----------	------------

6.Criminal

```
CREATE TABLE `criminal` (  
  `CriminalId` varchar(20) NOT NULL,  
  `Name` text DEFAULT NULL,  
  `JailTerm` text DEFAULT NULL,  
  `CaseId` varchar(20) DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
CREATE TABLE `criminal` ( `CriminalId` varchar(20) NOT NULL, `Name` text DEFAULT NULL, `JailTerm` text DEFAULT NULL, `CaseId` varchar(20)  
DEFAULT NULL ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

Output

CriminalId	Name	JailTerm	CaseId
------------	------	----------	--------



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(ii) Insert

This operation involves inserting records into each table with appropriate values

```
1 INSERT INTO `officer` (`OfficerId`, `FirstName`, `LastName`, `Ranking`, `Department`, `Phone`, `Address`,  
2 `BloodGrp`) VALUES  
3 ('CI101', 'Ashok', 'Kumar', 'SI', 'Crime Investigation', '8872314512', 'Rajajinagar', 'Bpositive'),  
4 ('CI200', 'Rakesh', 'Karthik', 'Inspector', 'Crime Investigation', '9901234522', 'Majestic', 'Opositive'),  
5 ('CI217', 'Chandru', 'Rajkumar', 'Inspector', 'Crime Investigation', '8800044422', 'Banashankari',  
6 'Opositive'),  
7 ('CI340', 'Sunil', 'Vadeyar', 'Inspector', 'Crime Investigation', '7700345621', 'Jayanagar', 'Apositive'),  
8 ('PA400', 'Vinod', 'Bhatt', 'Inspector', 'Patrol', '7878787894', 'Nagasandra', 'Apositive');
```

```
INSERT INTO `cases` (`CaseId`, `Name`, `DOC`, `Location`, `CRIME`, `OfficerId`) VALUES  
( '20124545', 'Theft', '2023-02-01', 'Reserve bank of India', 'Stolen 5 Cr', 'CI340'),  
( '27123232', 'Murder', '2023-02-10', 'Bangalore Palace', 'Murder of 2', 'CI101'),  
( '30033451', 'Extortion', '2023-03-04', 'Church street', 'Extorted 1 Cr', 'CI200'),  
( '31456781', 'Rape', '2023-04-06', 'Nation Resort', 'Gang rape', 'CI217'),  
( '41232316', 'Murder', '2023-04-12', 'Mantri residency', 'Murder of a businessman', 'CI340');
```

```
INSERT INTO `complaint` (`ComplaintId`, `Type`, `Complainant`, `DOC`, `Solved`, `CaseId`, `OfficerId`)  
VALUES  
( '1011', 'Criminal', 'Rajesh Verma', '2023-02-28', 'Yes', '27123232', 'CI101'),  
( '1033', 'Criminal', 'Vijay Narayan', '2023-04-09', 'No', '31456781', 'CI101'),  
( '1045', 'Criminal', 'Vaishnavi S', '2023-04-12', 'No', '41232316', 'CI340'),  
( '2033', 'Criminal', 'Manish M', '2023-05-01', 'No', '41232316', 'CI217');
```

```
INSERT INTO `complainant` (`ComplainantId`, `Name`, `Phone`, `Address`, `ComplaintId`, `RelationToVictim`)  
VALUES  
( '20344', 'Manish M', '6666666622', 'Jayanagar', '1033', 'Friend'),  
( '20347', 'Dhanush M', '7474747488', 'KR Road', '1045', 'Son'),  
( '20351', 'Rajesh Verma', '7898765432', 'Jayanagar', '2033', 'Brother'),  
( '20355', 'Vaishnavi S', '9876543210', 'Yeshwanthpur', '1011', 'Sister'),  
( '20370', 'Vijay Narayan', '8884371232', 'Lalbagh', '1011', 'Father');
```

```
INSERT INTO `arrest` (`ArrestId`, `DOC`, `Location`, `CellNo`, `OfficerId`, `CriminalId`) VALUES  
( 'AR111', '2023-04-01', 'Mysuru Road', 'CJ101', 'CI101', '4041'),  
( 'AR222', '2023-04-03', 'UB city', 'CJ202', 'CI200', '4042'),  
( 'AR333', '2023-04-05', 'Orion mall', 'CJ144', 'CI340', '4043');
```

```
INSERT INTO `criminal` (`CriminalId`, `Name`, `JailTerm`, `CaseId`) VALUES  
( '4041', 'Rocky', 'life', '27123232'),  
( '4042', 'Vicky', '10 yrs', '30033451'),  
( '4043', 'Michael', '5 yrs', '20124545');
```



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Outputs-

1.officer

+ -		OfficerId	FirstName	LastName	Ranking	Department	Phone	Address	BloodGrp
<input type="checkbox"/>	Edit Copy Delete	C1101	Ashok	Kumar	SI	Crime Investigation	8872314512	Rajajinagar	Bpositive
<input type="checkbox"/>	Edit Copy Delete	C1200	Rakesh	Karthik	Inspector	Crime Investigation	9901234522	Majestic	Opositive
<input type="checkbox"/>	Edit Copy Delete	C1217	Chandru	Rajkumar	Inspector	Crime Investigation	8800044422	Banashankari	Opositive
<input type="checkbox"/>	Edit Copy Delete	C1340	Sunil	Vadeyar	Inspector	Crime Investigation	7700345621	Jayanagar	Apositive
<input type="checkbox"/>	Edit Copy Delete	PA400	Vinod	Bhatt	Inspector	Patrol	7878787894	Nagandra	Apositive

2.cases

Caseld	Name	DOC	Location	CRIME	OfficerId
20124545	Theft	2023-02-01	Reserve bank of India	Stolen 5 Cr	C1340
27123232	Murder	2023-02-10	Bangalore Palace	Murder of 2	C1101
30033451	Extortion	2023-03-04	Church street	Extorted 1 Cr	C1200
31456781	Rape	2023-04-06	Nation Resort	Gang rape	C1217
41232316	Murder	2023-04-12	Mantri residency	Murder of a businessman	C1340

3.complaint

<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div></div>			ComplaintId	Type	Complainant	DOC	Solved	Caseld	OfficerId
<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div></div>	<div><div><div>Edit</div><div>Copy</div><div>Delete</div></div></div>	1011	Criminal	Rajesh Verma	2023-02-28	Yes	27123232	C1101	
<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div></div>	<div><div><div>Edit</div><div>Copy</div><div>Delete</div></div></div>	1033	Criminal	Vijay Narayan	2023-04-09	No	31456781	C1101	
<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div></div>	<div><div><div>Edit</div><div>Copy</div><div>Delete</div></div></div>	1045	Criminal	Vaishnavi S	2023-04-12	No	41232316	C1340	
<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div></div>	<div><div><div>Edit</div><div>Copy</div><div>Delete</div></div></div>	2033	Criminal	Manish M	2023-05-01	No	41232316	C1217	

4.complainant

T		ComplainantId	Name	Phone	Address	ComplaintId	RelationToVictim
<input type="checkbox"/>	Edit Copy Delete	20344	Manish M	6666666622	Jayanagar	1033	Friend
<input type="checkbox"/>	Edit Copy Delete	20347	Dhanush M	7474747488	KR Road	1045	Son
<input type="checkbox"/>	Edit Copy Delete	20351	Rajesh Verma	7898765432	Jayanagar	2033	Brother
<input type="checkbox"/>	Edit Copy Delete	20355	Vaishnavi S	9876543210	Yeshwanthpur	1011	Sister
<input type="checkbox"/>	Edit Copy Delete	20370	Vijay Narayan	8884371232	Lalbagh	1011	Father

5.arrest

<div><div></div><div></div></div>				ArrestId	DOC	Location	CellNo	OfficerId	CriminalId
<input type="checkbox"/>	<div><div></div><div>Edit</div></div>	<div><div></div><div>Copy</div></div>	<div><div></div><div>Delete</div></div>	AR111	2023-04-01	Mysuru Road	CJ101	C1101	4041
<input type="checkbox"/>	<div><div></div><div>Edit</div></div>	<div><div></div><div>Copy</div></div>	<div><div></div><div>Delete</div></div>	AR222	2023-04-03	UB city	CJ202	C1200	4042
<input type="checkbox"/>	<div><div></div><div>Edit</div></div>	<div><div></div><div>Copy</div></div>	<div><div></div><div>Delete</div></div>	AR333	2023-04-05	Orion mall	CJ144	C1340	4043

6.criminal

<div><div><div><div></div><div></div><div></div></div></div><div></div></div>				CriminalId	Name	JailTerm	Caseld
<div><div><div><div></div></div></div><div><div><div>Edit</div><div>Copy</div><div>Delete</div></div></div></div>	4041	Rocky	life	27123232			
<div><div><div><div></div></div></div><div><div><div>Edit</div><div>Copy</div><div>Delete</div></div></div></div>	4042	Vicky	10 yrs	30033451			
<div><div><div><div></div></div></div><div><div><div>Edit</div><div>Copy</div><div>Delete</div></div></div></div>	4043	Michael	5 yrs	20124545			



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(iii)Select

1.Select the entire table

```
SELECT * FROM `officer`
```

<div><div><div></div><div></div></div></div>		OfficerId	FirstName	LastName	Ranking	Department	Phone	Address	BloodGrp
<div><div><div></div><div></div></div></div>	<div><div>Edit</div><div>Copy</div><div>Delete</div></div>	CI101	Ashok	Kumar	SI	Crime Investigation	8872314512	Rajajinagar	Bpositive
<div><div><div></div><div></div></div></div>	<div><div>Edit</div><div>Copy</div><div>Delete</div></div>	CI200	Rakesh	Karthik	Inspector	Crime Investigation	9901234522	Majestic	Opositive
<div><div><div></div><div></div></div></div>	<div><div>Edit</div><div>Copy</div><div>Delete</div></div>	CI217	Chandru	Rajkumar	Inspector	Crime Investigation	8800044422	Banashankari	Opositive
<div><div><div></div><div></div></div></div>	<div><div>Edit</div><div>Copy</div><div>Delete</div></div>	CI340	Sunil	Vadeyar	Inspector	Crime Investigation	7700345621	Jayanagar	Apositive
<div><div><div></div><div></div></div></div>	<div><div>Edit</div><div>Copy</div><div>Delete</div></div>	PA400	Vinod	Bhatt	Inspector	Patrol	7878787894	Nagasandra	Apositive

2.Select based on conditions

```
SELECT * FROM `complaint` WHERE(Solved='No');
```

		ComplaintId	Type	Complainant	DOC	Solved	Caseld	OfficerId
<input type="checkbox"/>	Edit Copy Delete	1033	Criminal	Vijay Narayan	2023-04-09	No	31456781	CI101
<input type="checkbox"/>	Edit Copy Delete	1045	Criminal	Vaishnavi S	2023-04-12	No	41232316	CI340
<input type="checkbox"/>	Edit Copy Delete	2033	Criminal	Manish M	2023-05-01	No	41232316	CI217

3.Select an entry which does not exist

```
SELECT * FROM `complaint` WHERE(CaseId=11111111);
```

ComplaintId	Type	Complainant	DOC	Solved	Caseld	OfficerId
-------------	------	-------------	-----	--------	--------	-----------



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The below CRUD operations was performed using streamlit as frontend and MySQL as backend

(iv)Create

Add to Officer table

×

Menu

Add

Ranking

SI

Department

Crime Investigation

Phone

9092341256

Address

Ulsoor

BloodGrp

Onegative

Add Officer

Officer added successfully

Add to Cases table

×

Menu

Add

Add Data to Cases table

Case Name

Theft

DOC

2023/05/07

Location

Ulsoor

CRIME

Stole bicycle

Officerid

CI103

Add Cases

Case added successfully



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Add to complaint table

Menu
Add

Complainant

Naresh Babu

DOC

2023/05/07

Solved

No

Caseld

30033451

Officerid

CI101

Add Complaints

Complaint added successfully

Add to complainant table

Menu
Add

Add Data to Complainant table

Name

Sanjay

Phone

9891245097

Address

BTM

Complaintid

1045

RelationToVictim

Bystander

Add Complainant

Complainant added successfully

Add to criminal table



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×

Menu

Add ▾

Add Data to Arrest table ▾

Add Data to Criminal table ▴

Name

Rupesh

JailTerm

1yr

Caseld

41232318

Add Criminal

Criminal added successfully

Add to arrest table

×

Menu

Add ▾

AR117

DOC

2023/05/07

Location

Nagarbhavi

Cell No.

CJ132

OfficerId

CI102

CriminalId

4044

Add Arrest

Arrest added successfully

(v)Read

View Officer table



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Police Management System Dashboard

View data

View all officers

	OfficerId	FirstName	LastName	Ranking	Department	Phone	Address	Block
0	CI101	Ashok	Kumar	SI	Crime Investigation	8872314512	BTM	Bp
1	CI102	Ajay	Sarang	SI	Crime Investigation	9898123400	Ullal	AB
2	CI103	Satya	Naidu	SI	Crime Investigation	9092341256	Ulsoor	On
3	CI200	Rakesh	Karthik	Inspector	Crime Investigation	9901234522	Majestic	Op
4	CI217	Chandru	Rajkumar	Inspector	Crime Investigation	8800044422	Banashankari	Op
5	CI340	Sunil	Vadeyar	Inspector	Crime Investigation	7700345621	Jayanagar	Ap
6	PA400	Vinod	Bhatt	Inspector	Patrol	7878787894	Nagasandra	Ap

View Cases table

View all cases

	Caseld	Name	DOC	Location	CRIME	OfficerId
0	20124545	Theft	2016-04-16	Reserve bank of India	Stolen 5 Cr	CI340
1	27123232	Murder	2014-10-16	Bangalore Palace	Murder of 2	CI101
2	30033451	Extortion	2014-11-24	Church street	Extorted 1 Cr	CI200
3	31456781	Rape	2014-11-24	Nation Resort	Gang rape	CI217
4	41232316	Murder	2019-11-29	Mantri residency	Murder of a businessman	CI340
5	41232317	Pickpocket	2023-05-06	Arekere	Rolex watch pickpocketed	CI101
6	41232318	Theft	2023-05-07	Ulsoor	Stole bicycle	CI103
7	41232319	Theft	2023-05-07	Ulsoor	Chain snatching	CI103

View complaints and complainant table



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×

Menu

View

View all complaints

	ComplaintId	Type	Complainant	DOC	Solved	Caseld	OfficerId
0	1011	Criminal	Rajesh Verma	2023-02-28	Yes	27123232	CI101
1	1033	Criminal	Vijay Narayan	2023-03-03	No	31456781	CI101
2	1045	Criminal	Vaishnavi S	2023-04-01	No	41232316	CI340
3	2033	Criminal	Manish M	2023-01-01	No	41232316	CI217

View all complainants

	ComplainantId	Name	Phone	Address	ComplaintId	RelationToVictim
0	20344	Manish M	6666666622	Jayanagar	None	Friend
1	20347	Dhanush M	7474747488	KR Road	None	Son
2	20351	Rajesh Verma	7898765432	Jayanagar	None	Brother
3	20355	Vaishnavi S	9876543210	Yeshwanthpur	None	None
4	20370	Vijay Narayan	8884371232	Lalbagh	None	Father
5	20371	Sanjay	9891245097	BTM	1045	Bystander

View arrests and criminals table

×

Menu

View

View all arrests

	ArrestId	DOC	Location	CellNo	OfficerId	CriminalId
0	AR111	2023-04-01	Mysuru Road	CJ101	CI101	4041
1	AR117	2023-05-07	Nagarbhavi	CJ132	CI102	4044
2	AR222	2023-04-03	UB city	CJ202	CI200	4042
3	AR333	2023-04-05	Orion mall	CJ144	CI340	4043

View all criminals

	CriminalId	Name	JailTerm	Caseld
0	4041	Rocky	life	27123232
1	4042	Vicky	10 yrs	30033451
2	4043	Michael	5 yrs	20124545
3	4044	Raju	2yr	41232317

(vi)Update



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Update details in Officer table

Menu

Edit

Officer to Edit

CI101

Ranking:

SI

Department:

Crime Investigation

Phone:

8872314512

Address:

HSR

Update Officer

Officer's Detail has been updated

Updated row value

```
mysql> select * from officer;
```

OfficerId	FirstName	LastName	Ranking	Department	Phone	Address	BloodGrp
CI101	Ashok	Kumar	SI	Crime Investigation	8872314512	HSR	Bpositive

(vii)Delete

Remove case after it has been solved successfully

Menu

Remove

0	20124545	Theft	2016-04-16	Reserve bank of India	Stolen 5 Cr	CI340
1	27123232	Murder	2014-10-16	Bangalore Palace	Murder of 2	CI101
2	30033451	Extortion	2014-11-24	Church street	Extorted 1 Cr	CI200
3	31456781	Rape	2014-11-24	Nation Resort	Gang rape	CI217
4	41232316	Murder	2019-11-29	Mantri residency	Murder of a businessman	CI340
5	41232317	Pickpocket	2023-05-06	Arekere	Rolex watch pickpocketed	CI101
6	41232318	Theft	2023-05-07	Ulsoor	Stole bicycle	CI103
7	41232319	Theft	2023-05-07	Ulsoor	Chain snatching	CI103

Task to Delete

41232319

Do you want to delete ::41232319

Delete Case

Case has been solved successfully



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(viii) Stored function

Function is created to count the number of days between current date and date the criminal was arrested.

```
mysql> DELIMITER $$
mysql> CREATE FUNCTION date_difference (input_date DATE)
    -> RETURNS INT(4)
    -> DETERMINISTIC
    -> BEGIN
    -> DECLARE result INT(4);
    -> SET result = DATEDIFF(CURDATE(), input_date);
    -> RETURN result;
    -> END;$$
Query OK, 0 rows affected, 2 warnings (0.13 sec)
mysql> DELIMITER;
```

OUTPUT

```
mysql> SELECT date_difference(DOC) from ARREST;
+-----+
| date_difference(DOC) |
+-----+
| 36 |
| 34 |
| 32 |
+-----+
3 rows in set (0.00 sec)
```

(ix) Trigger

Trigger was created to automatically set the id of Cases, Criminal, Complaint and Complainant tables, and increment the max id value by one for each new row added.



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```
def trigger():  
    #c.execute('CREATE TRIGGER my_trigger BEFORE INSERT ON Officer FOR EACH ROW BEGIN -- generate a new cas  
    c.execute('CREATE TRIGGER CaseId'  
        'BEFORE INSERT ON Cases'  
        'FOR EACH ROW'  
        'SET NEW.CaseId = (SELECT MAX(CaseId) + 1 FROM Cases);')  
  
    c.execute('CREATE TRIGGER CriminalId'  
        'BEFORE INSERT ON Criminal'  
        'FOR EACH ROW'  
        'SET NEW.CriminalId = (SELECT MAX(CriminalId) + 1 FROM Criminal);')  
  
    c.execute('CREATE TRIGGER ComplaintId'  
        'BEFORE INSERT ON Complaint'  
        'FOR EACH ROW'  
        'SET NEW.ComplaintId = (SELECT MAX(ComplaintId) + 1 FROM Complaint);')  
  
    c.execute('CREATE TRIGGER ComplainantId'  
        'BEFORE INSERT ON Complainant'  
        'FOR EACH ROW'  
        'SET NEW.ComplainantId = (SELECT MAX(ComplainantId) + 1 FROM Complainant);')
```

You can see here that as soon as trigger was created, after **41232316** all the case ids are automatically incremented by one.

```
mysql> select * from cases;  
+-----+-----+-----+-----+-----+-----+  
| CaseId | Name      | DOC      | Location      | CRIME      | OfficerId |  
+-----+-----+-----+-----+-----+-----+  
| 20124545 | Theft     | 2016-04-16 | Reserve bank of India | Stolen 5 Cr | CI340      |  
| 27123232 | Murder    | 2014-10-16 | Bangalore Palace | Murder of 2 | CI101      |  
| 30033451 | Extortion | 2014-11-24 | Church street | Extorted 1 Cr | CI200      |  
| 31456781 | Rape      | 2014-11-24 | Nation Resort | Gang rape | CI217      |  
| 41232316 | Murder    | 2019-11-29 | Mantri residency | Murder of a businessman | CI340      |  
| 41232317 | Pickpocket | 2023-05-06 | Arekere | Rolex watch pickpocketed | CI101      |  
| 41232318 | Theft     | 2023-05-07 | Ulsoor | Stole bicycle | CI103      |  
| 41232319 | Theft     | 2023-05-07 | BTM | Chain snatching | CI101      |  
| 41232320 | Theft     | 2023-05-07 | Madiwala | Chain snatching | CI102      |  
| 41232321 | Theft     | 2023-05-07 | Madiwala | Stole shoes | CI102      |  
+-----+-----+-----+-----+-----+-----+  
10 rows in set (0.00 sec)
```



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CONCLUSION

(i) Successfully created a database on the police management system with various tables and its ER diagram and Relational schema

(ii) Successfully performed several operations on the database.

THE END!!!!