UCS310

Prison Management System

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BE Second Year COE

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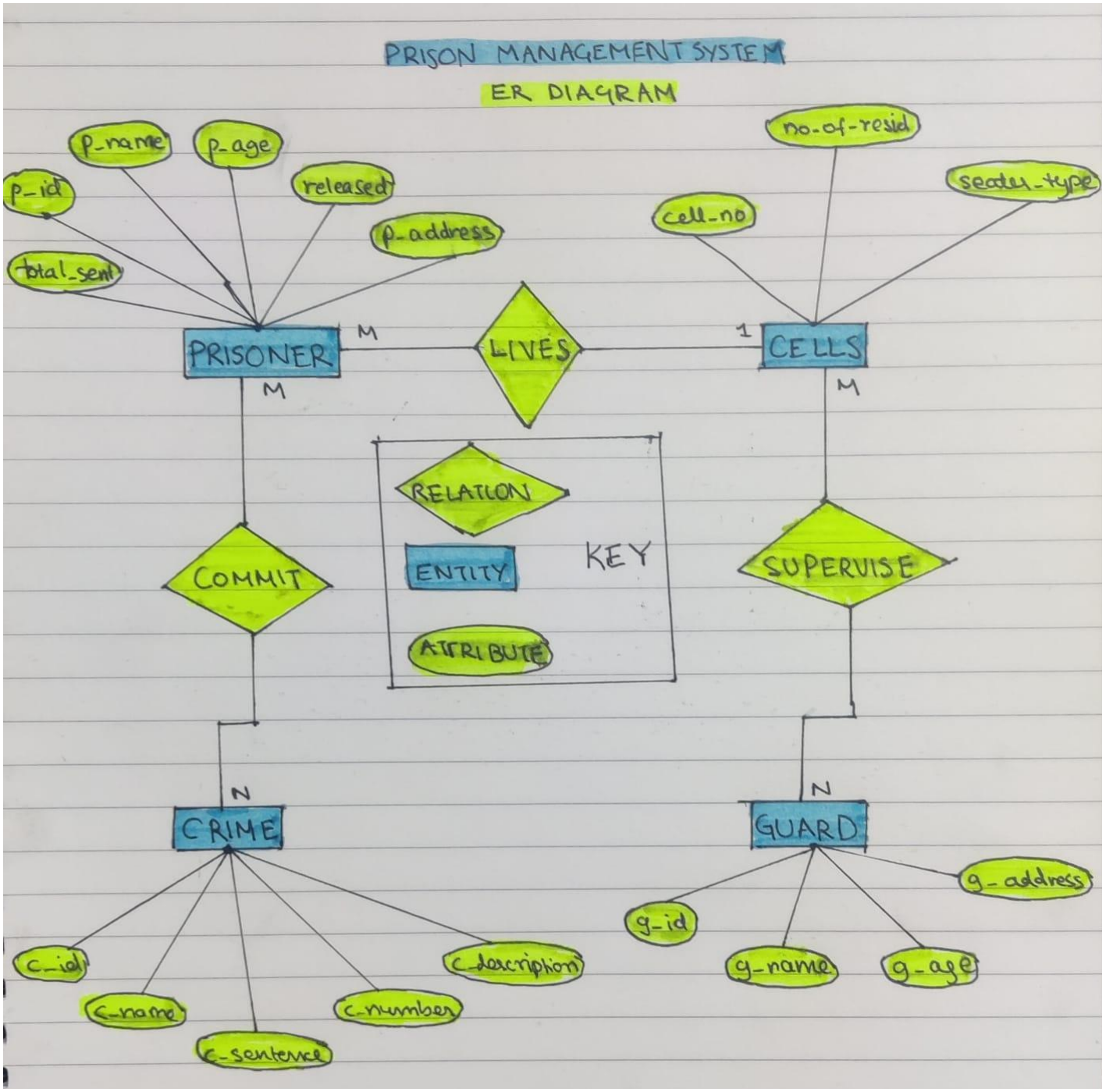
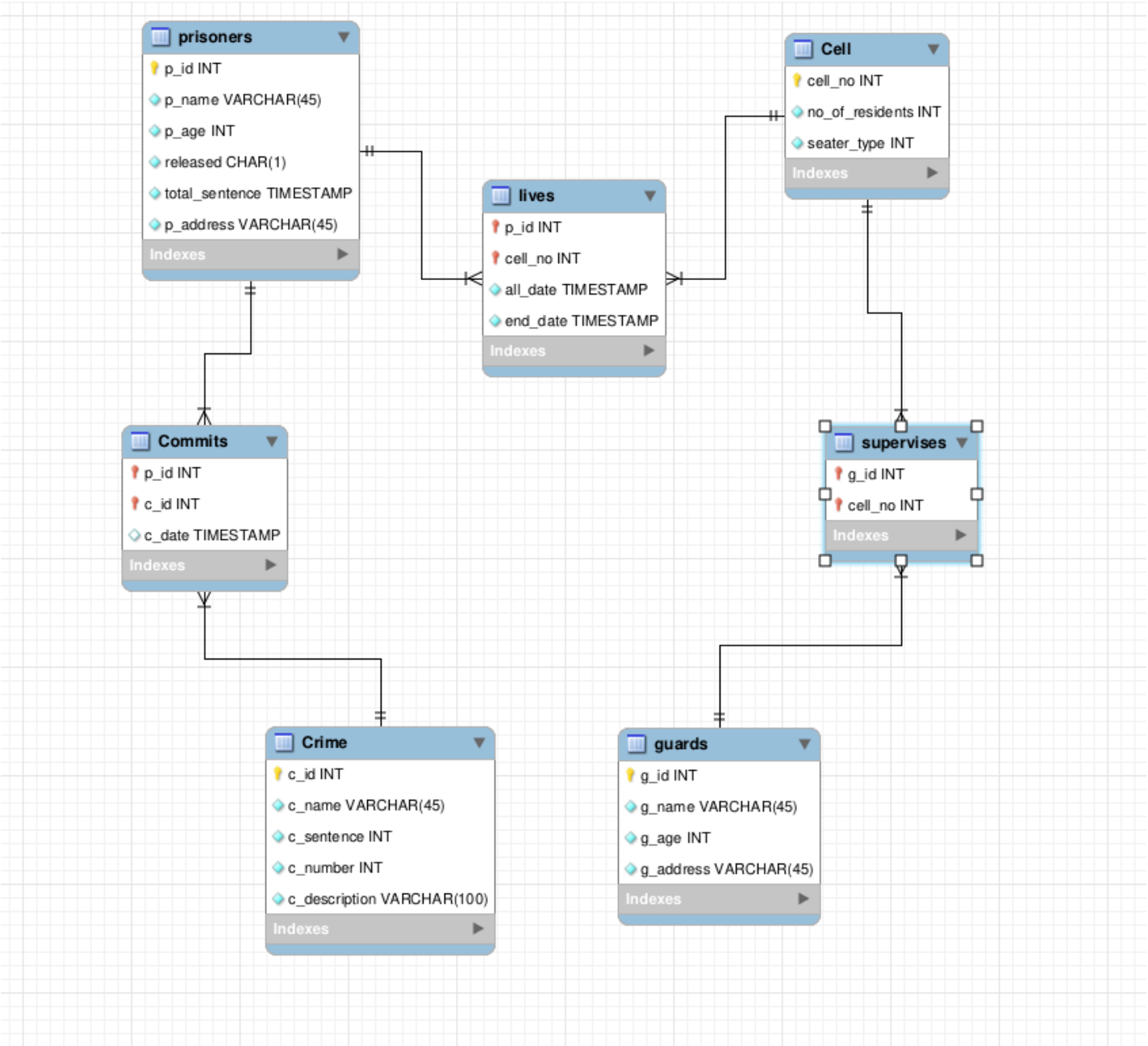
PROBLEM STATEMENT

The primary goals and objectives of prison systems are to maintain the care, custody, and control of inmates in order to prevent escapes, in addition to ensuring both the safety of both prison staff and inmates. The primary goal of prison management is to incapacitate inmates while providing rehabilitation and programs. Prison management not only has the responsibility of monitoring inmate behavior but must also monitor employee behavior and abuses. Prison staff is responsible for the care, custody, and control of inmates. It can only carry out the mission, goals, and objectives of the prison facility through effective and efficient management and leadership. In recent times, computers are being applied to prison management and this has given rise to automated prison management systems. An automated system for prison management is a computerized software system that aids in the capturing and management of prisoners' information. It can be easily updated and retrieved when needed. When considering prison automation, it is essential to understand that prison is the "hub" of the local criminal justice system. As such, the prisons' information needs (both inmate-specific and facility operations), and the needs of the local criminal justice system are dependent upon the adequacy of the automated jail management system. In order to address many of the problems facing jail management and local criminal justice systems and to more effectively and efficiently manage and plan local corrections, you must first understand and quantify the problem(s) i.e. jail crowding, trends in population characteristics, lack of adequate staffing, increased budget, etc. There are several commercial software solutions that do a decent job of providing for the line-level user's daily processing needs. However, few of these software solutions have been designed to adequately provide for the manager, administrator, or planner's needs. In addition, with the automation technologies available today, it is imperative that the automated prison management system have the capacity to easily interface (communicate/share information) with other criminal justice management systems. Generally in the past, any interfacing of local criminal justice management systems required sole-source contracting with a single provider offering an integrated criminal justice management solution, i.e. prisons, courts, probation, prosecutor, records management, etc. This requires comprehensive, reliable, and accessible data.

ER DIAGRAM


PRISON MANAGEMENT SYSTEM
ER DIAGRAM
p_name
p_age
p_id
released
p_address
total_sent
PRISONER
M
LIVES
1
CELLS
no-of-resid
seater-type
cell_no
M
M
RELATION
ENTITY
KEY
ATTRIBUTE
COMMIT
SUPERVISE
N
N
CRIME
GUARD
c_id
c_name
c_sentence
c_number
c_description
g_id
g_name
g_age
g_address

ER DIAGRAM TO TABLE



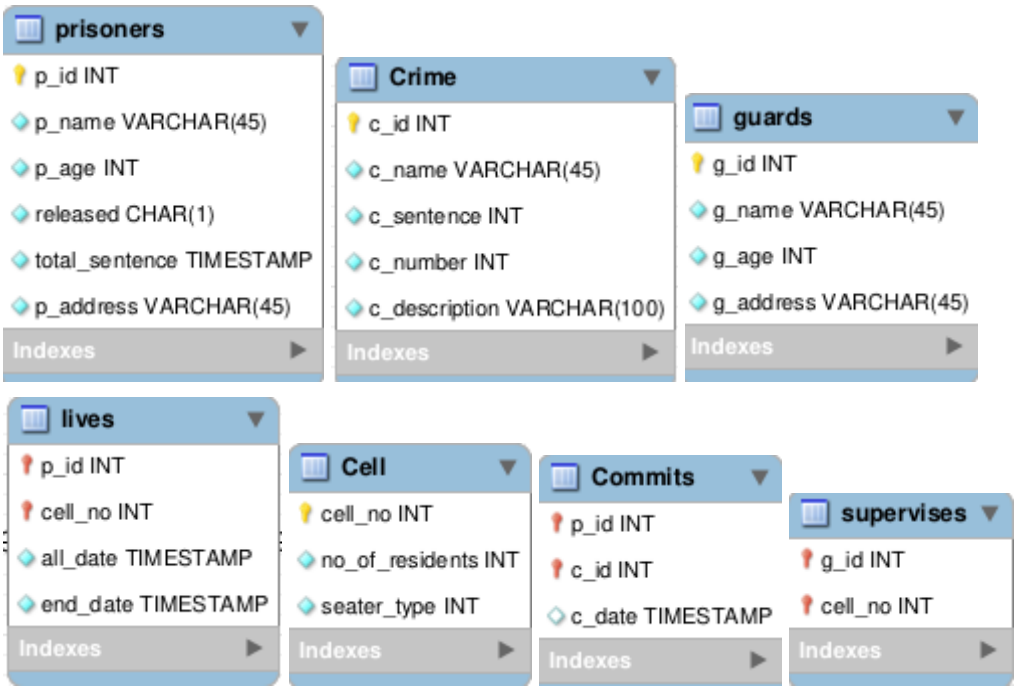
NORMALISATION

a) 1st Normal Form Procedure:
   i) All rows were made unique
   ii) All cells were made to have a single value
   iii) All values were made to be non-divisible

b) 2nd Normal Form Procedure:
   i) All non-prime attributes were made to be fully functionally dependent on the candidate key

c) 3rd Normal Form Procedure:
   i) All transitive dependencies were removed, meaning all non key attributes were only determined by the primary key

Resulting Tables:



SQL QUERIES

Displays all prisoner:

```
select * from prisoners;
```

Display all guards:

```
select * from guards;
```

Display all information of a particular prisoners:

```
select * from prisoners where p_id = ?;
```

Display all information of a particular crime:

```
select * from Crime where c_id=?
```

Used to return prison sentence left in days:

```
Select datediff(total_sentence, CURDATE()) as days from prisoners where p_id = ?;
```

Used to return crimes committed by a prisoner:

```
select * from Crime inner join Commits on Crime.c_id=Commits.c_id and Commits.p_id=?
```

Used to return cell mates for a particular cell:

```
select * from prisoners inner join lives on prisoners.p_id=lives.p_id and
lives.cell_no=?
```

Used to return common cell guards supervising on the same cell:

```
select * from guards inner join supervises on guards.g_id=supervises.g_id and
supervises.cell_no=?
```

Display all information of a particular guard:

```
select * from guards where g_id = ?; select * from supervises where g_id = ?
```

Used to return which cell is supervised by a particular guard:

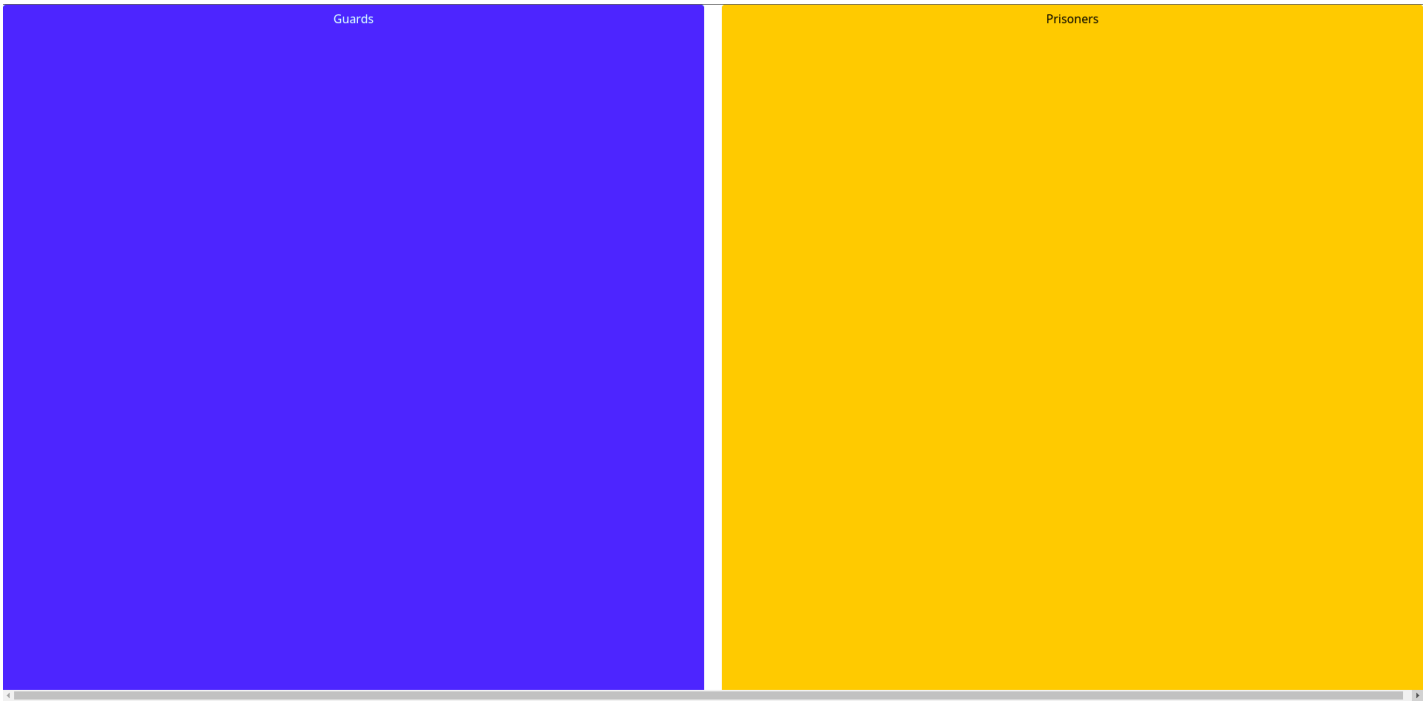
```
select * from supervises where g_id = ?;
```

Display all information of a particular crime:

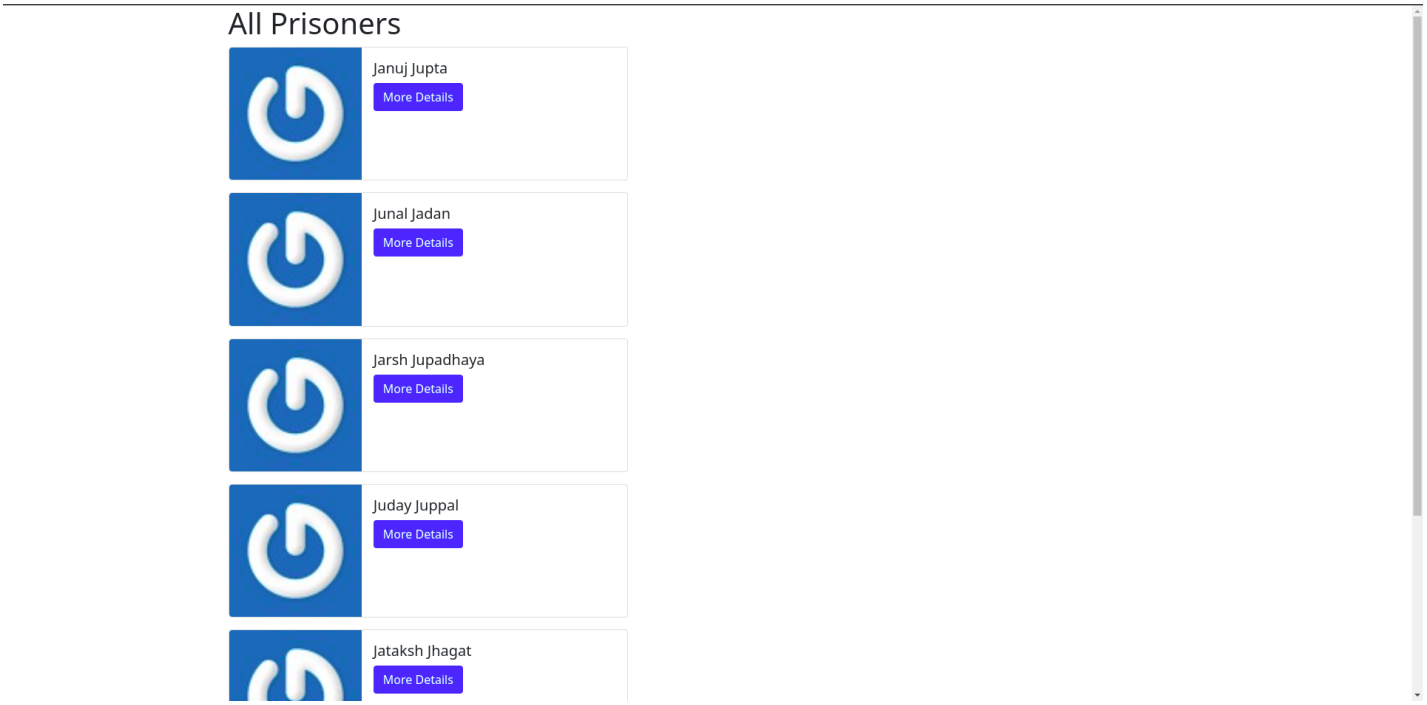
```
select * from Crime where c_id=?
```

OUTPUT SCREENSHOTS

HOME:



ALL PRISONERS:



PRISONER DETAILS:

Prisoner Show

Prisoner ID: 1
Prisoner Name: Januj Jupta
Prisoner Age: 19
Prisoner Address: ABC Street, Patiala
Sentence Left: 177 days
Cell Number: 1
Crime(s) committed: Hate Speech
All prisoners

CELL MATES:

Cell Mates

Januj Jupta
More Details

Junal Jadan
More Details

Home

CRIMES DETAILS:

Crime ID: 6
Crime Name: Hate Speech
Crime Sentence: 1 years
Crime Count: 1
Crime Description: Hate speech covers many forms of expressions which advocates hatred against people.
Home

ALL GUARDS:

All Guards


Jyom Japur
More Details


Jakshi Jhambhoj
More Details


Jhavika Jabra
More Details


Jarjun Jupta
More Details

Home

GUARD DETAILS:

Guard Show

Guard ID: 3
Guard Name: Jhavika Jabra
Guard Age: 19
Guard Address: DEF Street, Patiala
Supervises Cell Number: 3
All Guards

COMMON CELL GUARDS:

Cell Guards

Jhavika Jabra
More Details

Jarjun Jupta
More Details

Home