

All India Criminal Records

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Exp no.: 1

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List of functionalities.:

1. Identity

- a. Name
- b. Place and Date of birth
- c. Gender
- d. Nationality
 - i. şNational Id
 - ii. Passport
- e. Physical Appearances
 - i. Height
 - ii. Weight
 - iii. Eye color
 - iv. Hair
 - v. Scars and Marks
- f. Occupation - Previous and Current
 - i. Income

2. Family Record

- a. Parents
 - i. Name of Father
 - ii. Name of Mother
 - iii. Occupation of Father
 - iv. Occupation of Mother
- b. Marriage Status
- c. Siblings

3. Crime Record

- a. Current Crime

- i. Type of crime
 - 1. Victims
 - a. Victims Identity
 - ii. Crime Location
 - 1. Date
 - iii. Arrest details
 - 1. Date
 - 2. Location
 - 3. Arrested by
 - iv. Sentence
 - 1. Type
 - 2. Sentence Date
 - 3. Release Date
 - 4. Period
 - v. Fine
- b. Previous crime record
 - i. Type of crime
 - ii. Crime Location
 - iii. Arrest details
 - 1. Date
 - 2. Location
 - 3. Arrested by
 - iv. Sentence
 - 1. Type
 - 2. Date
 - 3. Release Date
 - 4. Period
 - v. Fine
- c. Threat level
- d. Arms
- e. Current Jail
 - i. Police Station
 - 1. FIR details
 - ii. Prison
 - 1. Location

Uses.:

- 1. For Companies and Universities to check for previous criminal records of new applicants.**
- 2. To check connections of a particular criminal in a newly happened crime.**
- 3. To identify suspects for a crime in a given area.**
- 4. Transparency of Police work**

How do they do it- Database infrastructure of Popular Company in your case study domain.

1. Data Modeling: Before creating a database, law enforcement agencies need to design its structure. This involves defining tables, their relationships, and the attributes (columns) that each table will contain. For instance, there might be tables for criminals, offenses, court records, and law enforcement agencies. SQL's data definition language (DDL) is used to create these structures.

2. Data Retrieval and Filtering: SQL's ``SELECT`` statement is used to retrieve data from the database. This can be as simple as fetching all records or more complex, involving filtering, sorting, and grouping the results. For example, law enforcement could use SQL to find all criminals with a certain *modus operandi* within a specific time frame.

3. Joins and Relationships: Criminal databases often have tables with relationships. SQL allows the use of ``JOIN`` operations to combine data from multiple tables. For instance, linking criminal records with offense details or connecting criminals with their associated law enforcement agencies.

4. Data Modification: SQL's ``INSERT``, ``UPDATE``, and ``DELETE`` statements are used to modify the data in the database. When a new criminal is arrested or convicted, data is inserted. If there are updates to a criminal's record, SQL updates are applied.

5. Constraints and Validation: Database languages provide mechanisms for enforcing rules on data integrity. For instance, specifying that a certain attribute cannot be left blank or ensuring that certain values are unique across records.

6. Transactions: Database systems allow multiple SQL statements to be grouped into transactions. This ensures that a series of related changes either occur together or not at all. This is critical for maintaining data consistency and accuracy.

7. Indexing and Performance: SQL can be used to create indexes on specific columns. This speeds up data retrieval operations by allowing the database system to quickly locate relevant records.

8. Views and Security: SQL enables the creation of database views, which are virtual tables based on the result of a query. Views can be used to restrict access to sensitive data or provide a simplified perspective on complex data.

9. Normalization: Database designers use SQL to apply normalization techniques, which organize data to reduce redundancy and improve efficiency. This ensures that data is stored logically and efficiently.

10. Reporting and Analysis: SQL queries are used to generate reports and analyze trends. Law enforcement agencies can use these insights to allocate resources effectively, predict crime patterns, and make informed decisions.

11. Backup and Recovery: SQL commands are used to create backups of databases, ensuring that data can be restored in case of system failures or data corruption.

12. Maintenance: Database administrators use SQL to optimize database performance, manage storage, and perform routine maintenance tasks.

In summary, database languages like SQL play a crucial role in managing criminal databases by allowing law enforcement agencies to interact with and manipulate the data effectively. These languages facilitate data storage, retrieval, manipulation, and analysis, ensuring that accurate and up-to-date information is available to support law enforcement efforts and maintain public safety.