2-1) Functional Requirements:

- Insert the image into database.
  - **Input**: Image of the criminal will be inserted with the required details.
  - **Output**: Image will be shown in our database
  - **Processing**: Image will be converted to a data entry and will be stored in database.
- Split the image into no of parts.
  - **Input**: One Image will be taken out from the database and would be divided into 4 parts comprising of head, eyes, nose, and lips.
  - **Output**: We would get 4 different images of one criminal which will be stored in the database.
  - **Processing**: Images would be cropped into 4 parts such that the lips, eyes, head and nose of the criminal are separated.
- Merge the parts.
  - **Input**: The parts of the criminal identified by the eyewitness would be merged in our software.
  - **Output**: Final image of the criminal will be created by our software and would be shown in the database under Witnessed Criminals.
  - **Processing**: Images of head, eyes, nose and lips as told by the witness would be merged.
- Identify the image.
  - **Input**: The final image stored under the Witnessed Criminal will be shown to the eyewitness.
  - **Output**: The eyewitness would identify the criminal and would tell if the image resembles the actual criminal.
  - **Processing:** The eyewitness would see the final image and tell the admin if the image resembles the actual criminal.
- Draw image manually.
  - **Input:** The image finalized by the eyewitness would be given to sketch artist to make the final image of the criminal.

  - **Output:** The final image drawn by the sketch artist would be stored under the Criminals section in the database.
  - **Processing:** Final image would be stored by the admin in the database.
- Maintain separate login for admin and operator.
  - **Input**: Separate login for admin and the eyewitness would be done.
  - **Output**: Separate account would be created for admin and eyewitness.
  - **Processing**: The admin and eyewitness would have to create their respective accounts.
- Maintain information about each criminal
  - **Input**: The admin would maintain the database for the criminals, eye-witnesses, and Actual criminals.
  - **Output**: The complete database of all the users, suspected criminals and actual criminals.
  - **Processing**: The admin will enter the data into the database.

1-2) Non-functional Requirements:

- Reliability
- Security
- Testing
- Usability
- Performance Requirements
- Human-Computer Interface
- Maintainability & Reusability

1-3) Constraints:

- This system would not work on twin brothers/sisters.
- The system would not work properly if there are very less criminal records.
- The efficiency of this system would also depend upon the eyewitness' memory power.
- The efficiency would be limited by the ability of sketch artist to draw the image of actual criminal.

1-4) Module Description:

Well-structured designs improve the maintainability of a system. A structured system is one that is developed from the top down and modular, that is, broken down into manageable components. In this project we modularized the system so that they have minimal effect on each other.

This application is designed into five independent modules which take care of different tasks efficiently.

1. User Interface Module:

Actually every application has one user interface for accessing the entire application. In this application also we are providing one user interface for accessing this application. The user interface designed completely based on the end users. It is provide friendly accessing to the users. This user interface has attractive look and feel. Technically I am using the swings in core java for preparing this user interface.

2. Admin Module:

User requirements	Elaboration	Further Elaboration
Create	Assign new user id & password for an employee.	
Delete	Administrator can delete the user id & password of unwanted employee.	
Update	First the details of employees are to be obtained by using user id & password.	After obtaining the original details the updated details are submitted.

3. Client Module:

User requirements	Elaboration	Further Elaboration
Login	Employee login to home page by entering id & password.	
Adding details	Personal details of criminal store in to data base	Images are cropped and saved in database.
Update process	Enter criminal id and obtain his details	Update the details and images of existing criminal
Delete process	Enter criminal id	Delete the details and image of unwanted criminal
Logout	Logout in to the home page	

4. Splitting and Merging Module:

Requirements	Elaboration	Further Elaboration
View clippings	View all clips and select the clip shown by eyewitness	Compare the clippings with images of criminals
Construction	Construct the face of criminal by clubbing all freeze clippings	

5. Database Operations Module:

ADD MODULE: The add module is helpful in adding the details of the criminals along with the details of the criminal photo. While adding the details of the criminal, we crop the image of the criminal and store those cropped parts in a separate database.

DELETE MODULE : This module deletes the criminal details along with the photo. The operator first submits the criminal id and searches for the availability of the id in the database. If that id is available in the database, then the operator may delete the record of that particular r criminal.

UPDATE MODULE : The operator first enters the criminal id and searches for the availability of that id .If that id is available in the database , then the details of that criminal are retrieved and the operator can update the details of that criminal and that updated details of the criminal are stored in the database again for future retrieval.

6. Identify Module:

The cropped parts of the criminals, along with the criminal Id are viewed by the eyewitness .The eyewitness selects particular cropped part of the criminal and it is freeze by the operator., then complete face of the criminal is constructed and the details of the criminal is retrieved.