Green University of Bangladesh

Dept. of CSE

Course Title: Information System and Design Lab

Project Report

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1. Team information:

Manager	Leader	Writer	Information Researcher
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2. Project Name: Hijack detection system.

3. Feasibility Study: In the Bangladeshi aspect, hijacking is a very common problem in the city area.

- **Scope:**
  a. Suspicious movement/person detection.
  b. High risky hijacking area identification.
  c. Current Hijack location detection.
  d. Suspicious Face/Hijacker detection.
  e. Hijacked instrument detection (Phone, money bag, laptop, bag, ornaments)
  f. Hijacker's location identification.
  g. Warning/alarm on that zone and report to police.
- **Advantage:**
  a. The tendency to steal will decrease.
  b. People will be able to move freely.
  c. There is no need to be afraid of theft when traveling.

d. Rapists can be easily identified and punished on the streets.

4. Complexity:

a. Equipment used in forensics is expensive.

b. This process will be much more complicated.

c. Scientific analysis consumes a lot of time.

d. It may not have 100% accuracy.

5. Market analysis:

a) The market size of digital investigation is increasing day by day.

b) If we can bring it to market successfully then there will be a lot of demand for it.

6. Functional Requirement:

a) Hijacker Detection.

b) Assist/ Support to affected people find out the hijacked things.

c) Suspicious movement/ person detection.

d) Current Hijack place detection.

e) Hijacked instrument detection (Phone, moneybag, laptop, bag, ornaments)

f) Hijacker movement detection.

g) Detect the location of hijacker movement.

h) Warning/ Alarm on that zone, or report to police

7. Non-Functional Requirement:

a) Central Database.

b) This system will have safety and security, no hijacker can destroy the system.

c) Its performance will work very well.

8. Data Analysis:

a) Suspicious person face/ image data collection.
b) Current hijack place/ location data collection.
c) Hijack Time
d) Analyze the occurrence of hijacking from video/ image data.
e) Face reorganization from video/ image data.

9. Database Design:

- **Normalization**

User Name	List of items	Address	Time	Hijacked type	Hijacker face
Kamal	Laptop	Shewrapara	10:10am	Snatch	Image_1
Papon	Mobile	Mirpur-10	2:00pm	Snatch	Image_2
Pappu	Moneybag	Farmgate	6:00pm	Snatch	Image_3
Polas	Ornaments	Gulistan	12:15pm	Snatch	Image_4
Tipu	Bag	Gazipur	11:19am	Snatch	Image_5

- **1st Normalization:**

Id	User Name	List of items	Address	Time	Hijacked type	Hijacker face
01	Kamal	Laptop	Shewrapara	10:10am	Snatch	Image_1
02	Papon	Mobile	Mirpur-10	2:00pm	Snatch	Image_2
03	Pappu	Moneybag	Farmgate	6:00pm	Snatch	Image_3
04	Pappu	Ornaments	Gulistan	12:15pm	Snatch	Image_4
05	Tipu	Bag	Gazipur	11:20am	Snatch	Image_5

- **2nd Normalization:**

Id	Name	Address	Time	List of items
01	Kamal	Shewrapara	10:10	Laptop
02	Papon	Mirpur-10	2:00	Mobile
03	Pappu	Farmgate	6:00	Moneybag
04	Pappu	Gulistan	12:15	Ornaments
05	Tipu	Gazipur	11:19	Bag

Id	Hijacked type	Hijacker face
01	Snatch	Image_1
02	Snatch	Image_2
03	Snatch	Image_3
04	Snatch	Image_4
05	Snatch	Image_5

Hijack Affected People id	Hijacker id
01	01
01	02
02	04
04	01
03	05

- **3rd Normalization:**

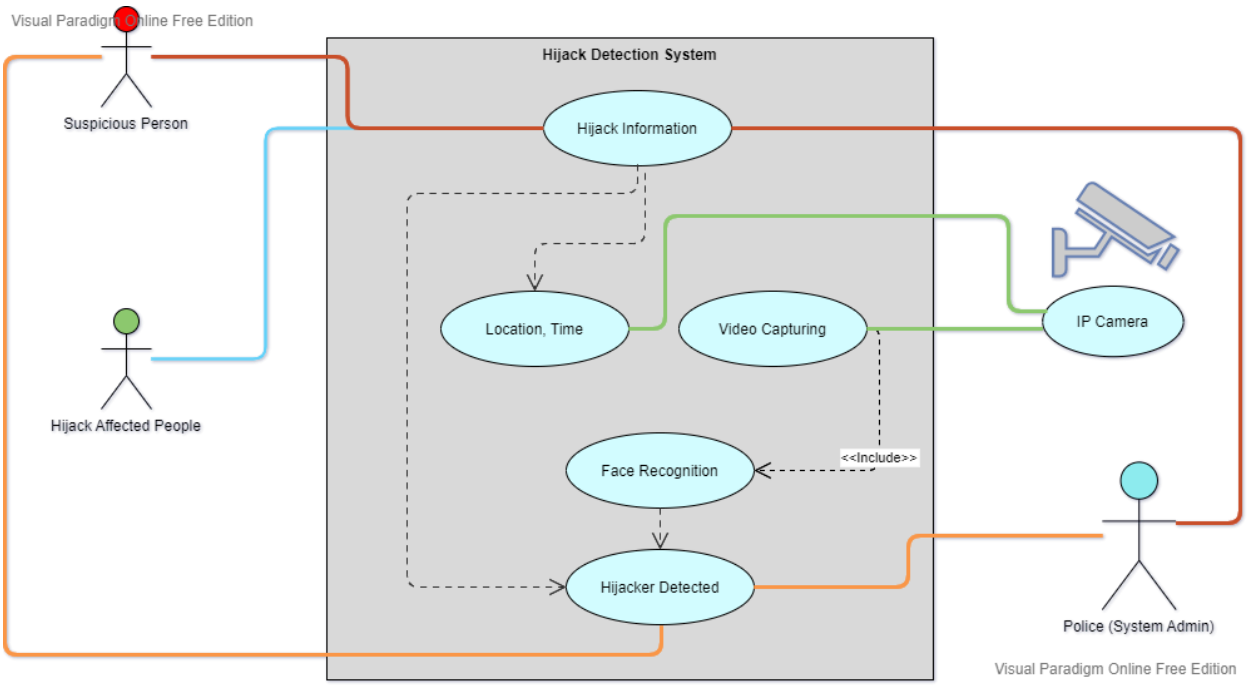
Id	Name	Address	Time	List of items
01	Kamal	Shewrapara	10:10	Laptop
02	Papon	Mirpur-10	2:00	Mobile
03	Pappu	Farmgate	6:00	Moneybag
04	Pappu	Gulistan	12:15	Ornaments
05	Tipu	Gazipur	11:19	Bag

Id	Hijacked type
01	Snatch
02	Snatch
03	Snatch
04	Snatch
05	Snatch

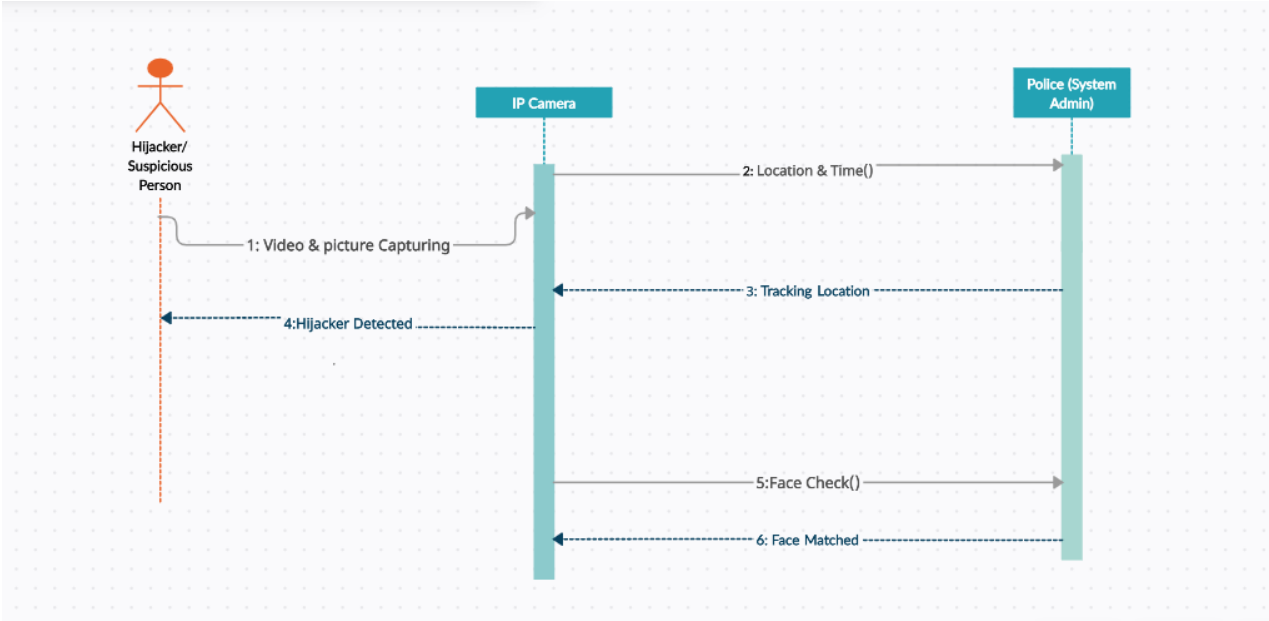
Hijack Affected People id	Hijacker id
01	01
01	02
02	04
04	01
03	05

Hijacked type	Hijacker face
Snatch	Image_1
Snatch	Image_2
Snatch	Image_3
Snatch	Image_4
Snatch	Image_5

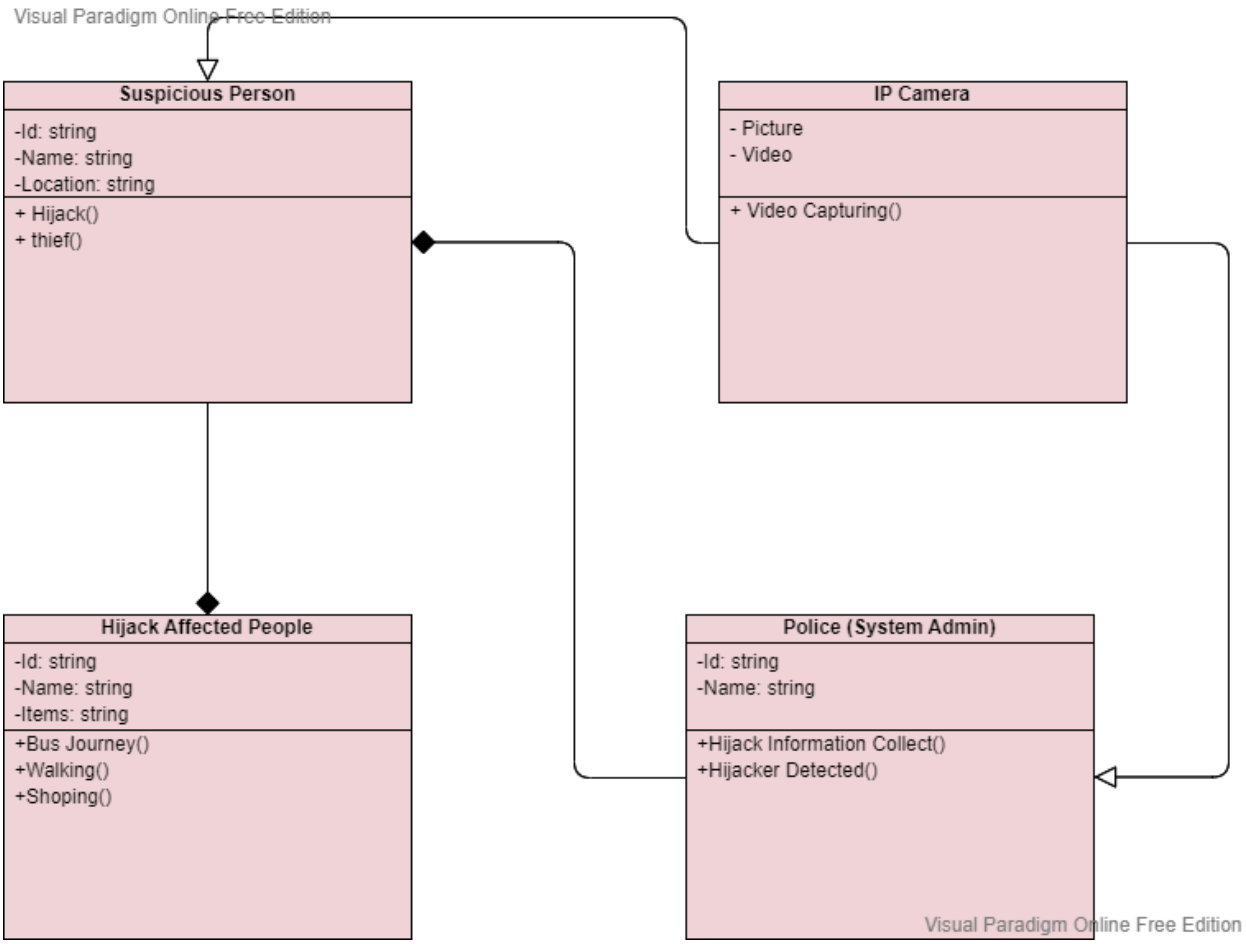
10. Use Case Diagram:



11. Sequence Diagram:

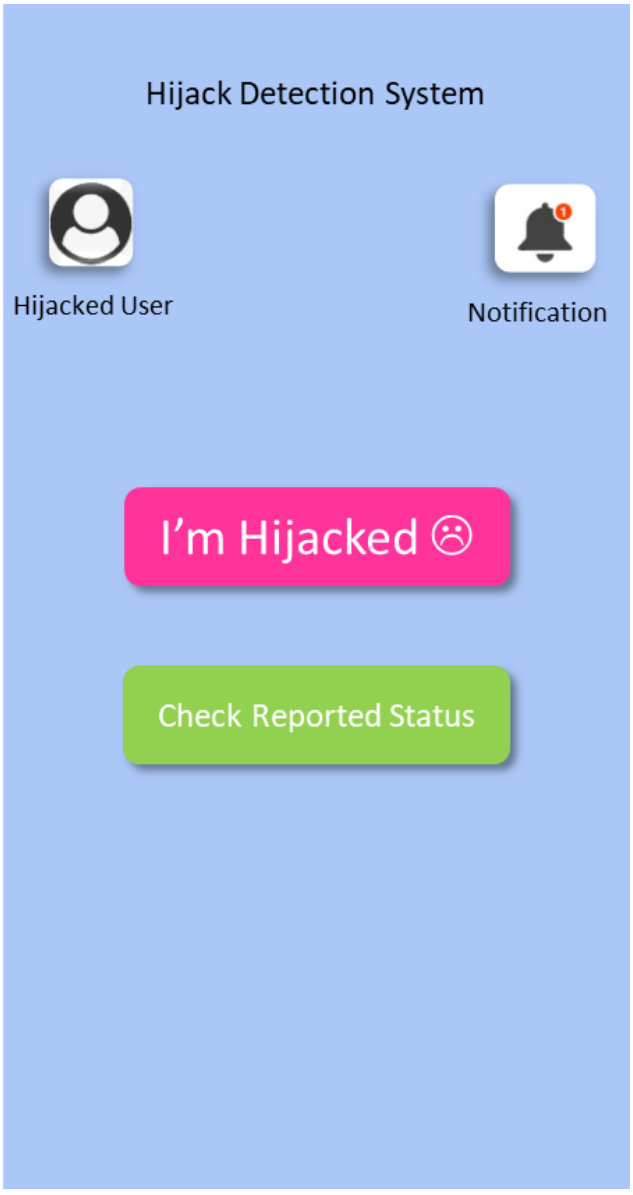


12. Class Diagram:

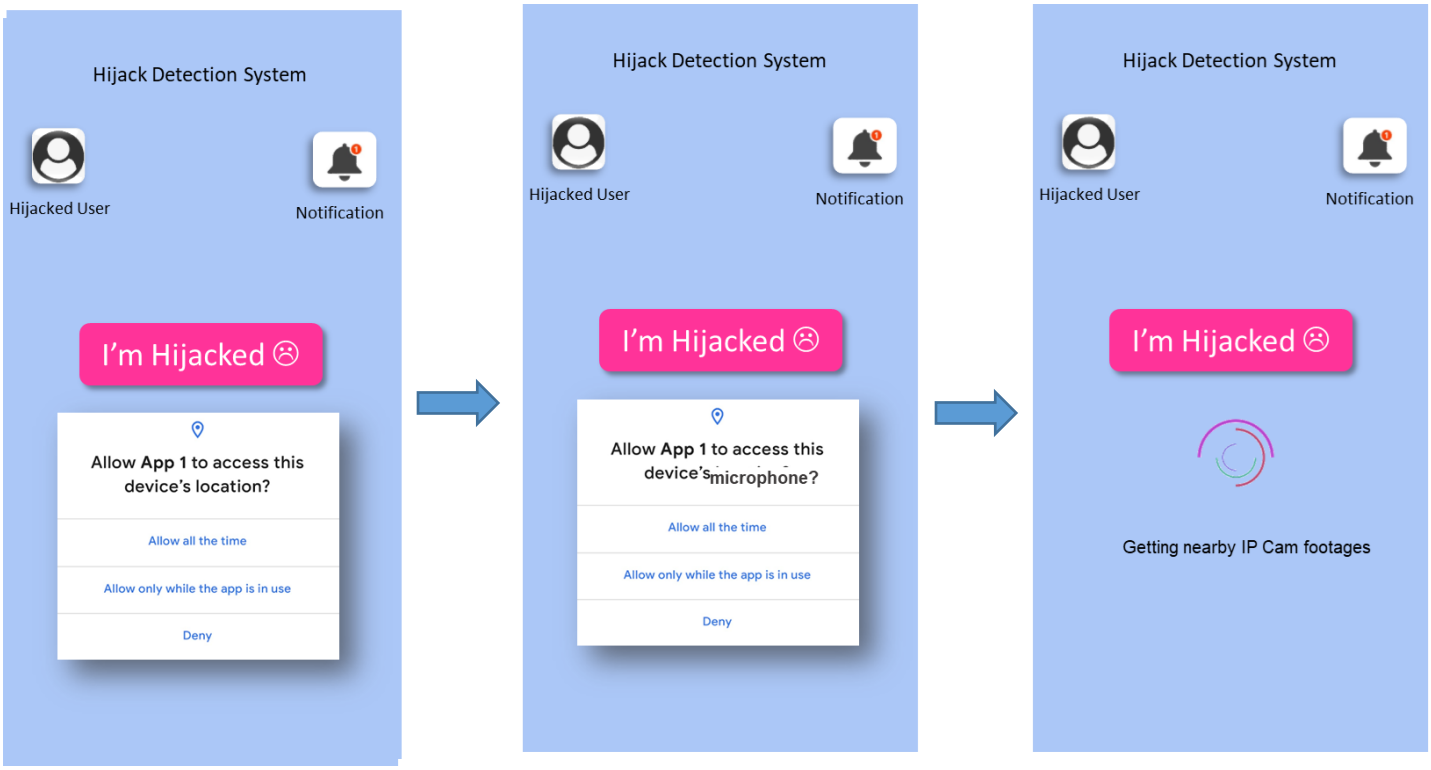


13. Prototype:

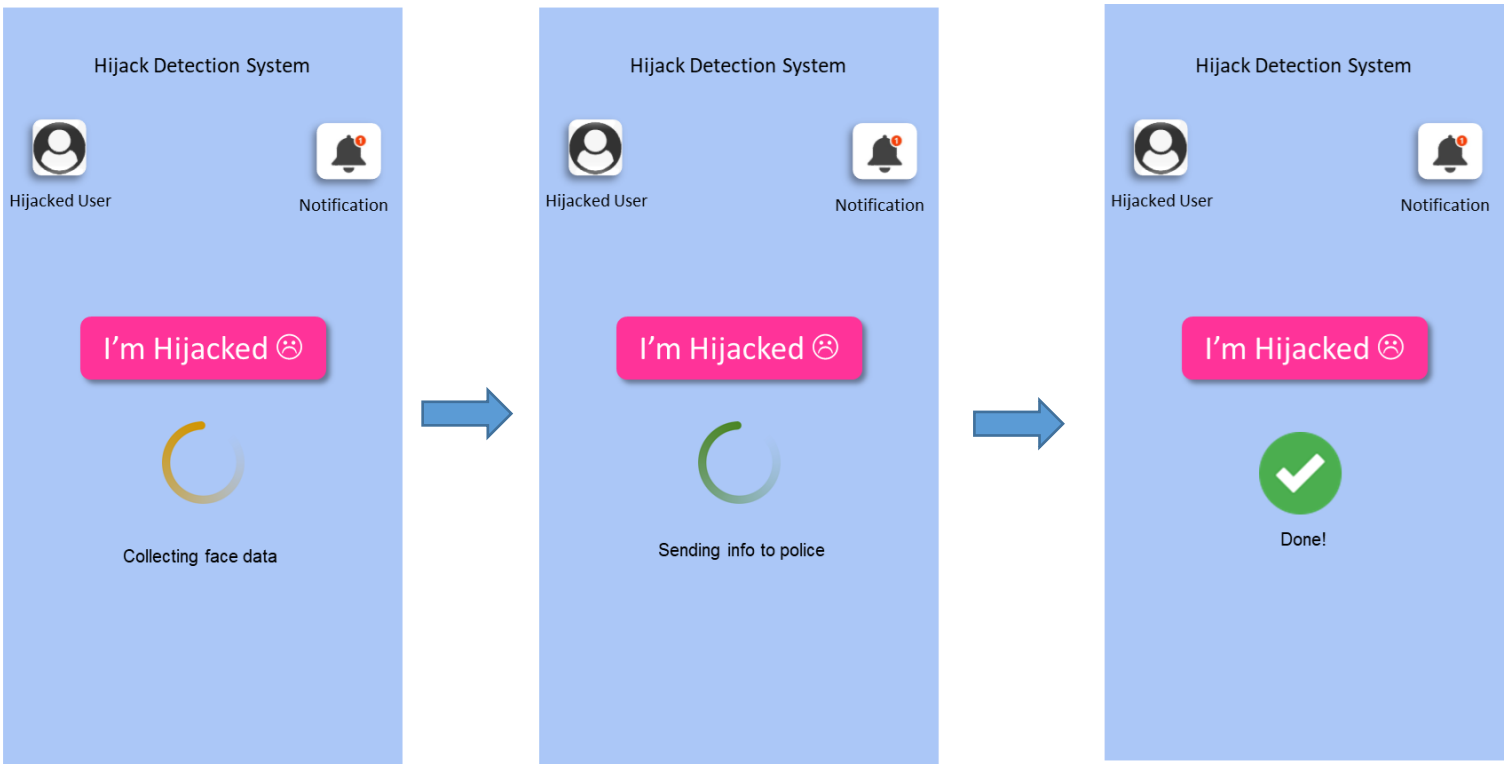
Step-01



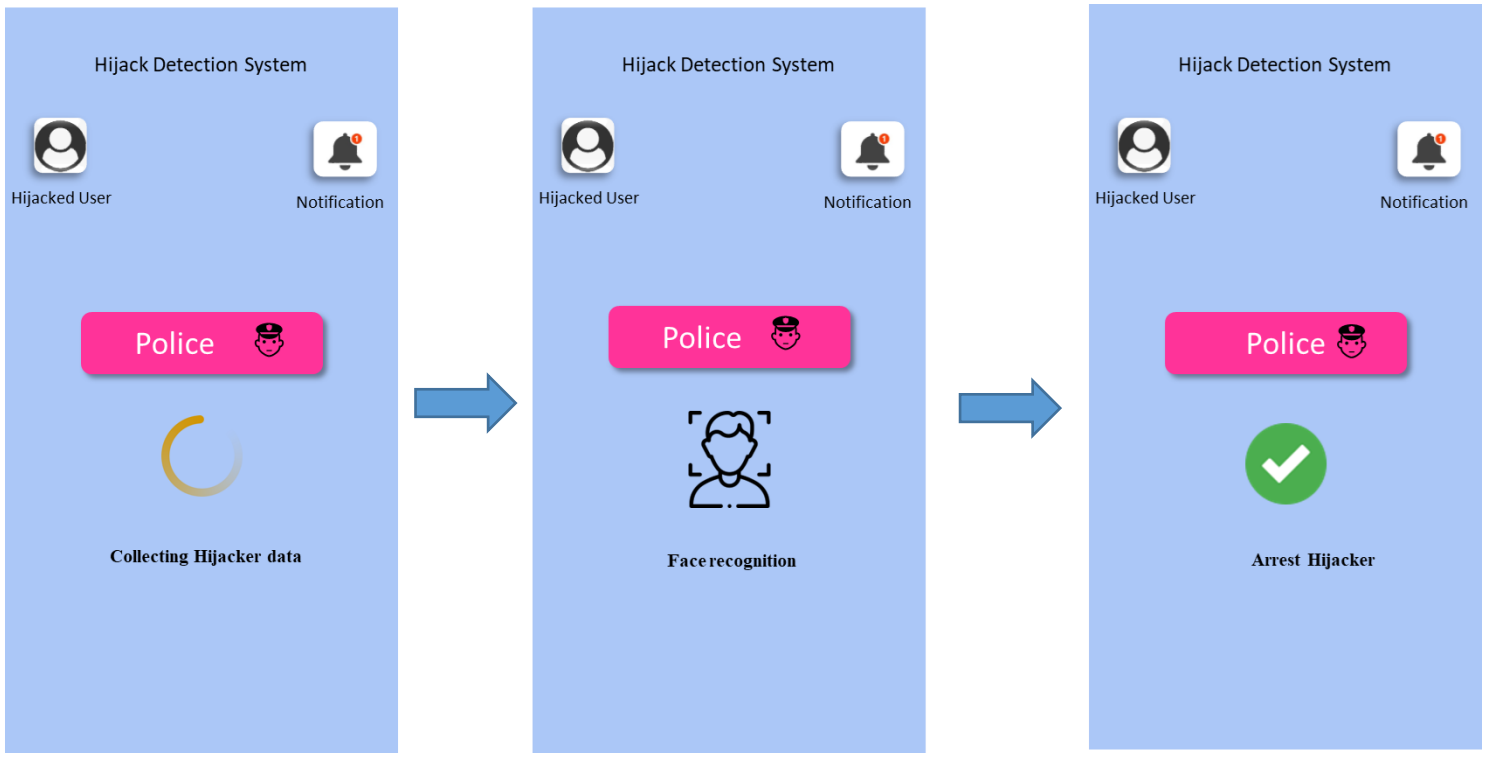
Step-02


Hijack Detection System
Hijacked User
Notification
I'm Hijacked ☹
Allow App 1 to access this device's location?
Allow all the time
Allow only while the app is in use
Deny
Hijack Detection System
Hijacked User
Notification
I'm Hijacked ☹
Allow App 1 to access this device's microphone?
Allow all the time
Allow only while the app is in use
Deny
Hijack Detection System
Hijacked User
Notification
I'm Hijacked ☹
Getting nearby IP Cam footages

Step-03


Hijack Detection System
Hijacked User
Notification
I'm Hijacked ☹
Collecting face data
Hijack Detection System
Hijacked User
Notification
I'm Hijacked ☹
Sending info to police
Hijack Detection System
Hijacked User
Notification
I'm Hijacked ☹
Done!

Step-04


Hijack Detection System
Hijacked User
Notification
Police
Collecting Hijacker data
Hijack Detection System
Hijacked User
Notification
Police
Face recognition
Hijack Detection System
Hijacked User
Notification
Police
Arrest Hijacker

Thank You