

### 3. FUNCTIONAL REQUIREMENTS

#### A. Registration:

##### Functional Requirements:

- Software will allow users to register with either their phone number or email address.
- After the first step is successful, the software will collect user data (Name, Profile picture (must be shown his face), Password, Username, Date of Birth, Gender, Address, Parent and children information etc.).
- Software compels users to create secure passwords, consisting of 8 digits where there should be at least an uppercase, at least a lower case also it must include a special symbol and a number digit.
- The software will issue a 4-digit verification code in the provided email or phone number if all the stages have been followed.
- Databases will be used to store the sign-up information, including login, password, and email address.

**Priority level:** High.

**Precondition:** The user should have a valid email address or a valid phone number, valid password, valid username, proper profile picture.

#### B. Login:

##### Functional Requirements:

- Users may log in to the software using their provided username and password.
- The username and password used for login will be compared to database records.
- If the login process is successful, the home page will be shown.
- The system shall restrict the user profile login to thirty minutes if the number of login attempts exceeds its limit (three times).

**Priority level:** High.

**Precondition:** The user must have a Username and Password.

#### C. Forget Password:

##### Functional Requirements:

- Users need to provide the exact same email/phone number, which was added to the account during registration, to recover the account.
- If the entered email address is valid, send an email with a reset link to it.

- Reset link provides a temporary password to identify the user account and save its information.
- When the password is reset, it returns to login page

**Priority level:** High.

**Precondition:** The user must register with Phone No./Gmail.

#### **D. Map:**

##### **Functional Requirements:**

- This system will display a map on both children's and parents' ends.
- The map highlights nearby police stations.
- The system will categorize the locations into 3 categories, such as red zone, Yellow zone and Green zone. based on recent criminal activities, traffic records, population records and reviews from other users.
- Red zone consists of zones that are highly prone to criminal activities and the yellow zones are moderately prone and green zones are the safest of them all.
- The map will directly connect with google map so user must need a google account
- This feature highly relies on location so, the users must turn on locations beforehand using this

**Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials and location is turned on.

#### **E. Live Location Sharing:**

##### **Functional requirements:**

- The live location of the users will be shared with the selective users.
- This feature requires the users to turn their location on, so users must turn on location beforehand using this feature
- This live location will be shared on maps.
- In parents end they can check up on their children where they are in live time using this

**Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials and location is turned on.

#### **F. Automated protection queries and danger**

##### **detection:**

##### **Functional requirements:**

- If the system detects that the user is in a red zone it automatically asks if they are safe or not.
- The system asks 3 times and gives them sufficient time to answer
- The system also detects unusual activities such as, going to somewhere the user wasn't supposed to go, turning off location, deactivating the app, and going to red and yellow zones.
- The system always asks beforehand considering that the user is in danger.

**Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials and location is turned on.

#### **G. Automatic calling and notifications**

##### **Functional requirement:**

- If system Detect any unusual Gesture movement Automatic notification will be active and send a notification to parents.
- After sending notification, the system will call trusted contact (5 contact if 1<sup>st</sup> one misses the call).
- The system will call the nearest police station (999 if police station is far from situation place). **Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials and the location is turned on also they had set up proper emergency contacts.

#### **H. Panic button:**

##### **Functional requirements:**

- User can Click on screen panic button for instant turning on automatic calling system.
- If the users unintentionally press the button press the stop button and enter their user password within 30 seconds.

- After pressing the button, the system automatically finds the location of the users and informs the police.

**Priority level:** Medium.

**Precondition:** The user must create a valid account and login with valid credentials and the location is turned on also they had set up proper emergency contracts.

## **I. Emergency Contact:**

### **Functional requirements:**

- Users can add Five emergency contact numbers from their relatives (Father > Mother > Elder Brother/sister > Uncle > relatives)
- Users must provide a valid contact number.
- The system will check the number to see if it is correct or not and send a notice if it is.
- Users can also update emergency contact if needed.  
(User Must enter his/her password after editing contact).
- The system will send a verification code to the user's given number to verify.

**Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials.

## **J. Profile page:**

### **Functional requirements**

- They can edit their Information (name, username, password, etc.) here.
- Users can edit their previous reports on activities.
- They can change the theme as well.
- They can add, edit and delete the emergency contacts.

**Priority level:** Medium.

**Precondition:** The user must create a valid account and login with valid credentials.

## **K. Daily destinations:**

### **Functional requirements**

- Users can set their daily destinations they will visit beforehand leaving their homes.
- If the user goes to a place that he is not supposed to go, then the system will trigger the Automated protection system **Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials and location is turned on.

## **L. Child Monitoring**

### **Functional requirements**

- Parents can keep track of their child's browsing history.
- Parents can watch their screen live.
- Parents can have a report of their child's total screen time, which apps they are using the most etc.
- It also sends an alert note to parents if the child goes to place on internet where he is not supposed to go.

**Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials and the parent's account is connected with child's account.

## **M. Live video & audio**

### **Functional requirements**

- parents can start video and audio streaming remotely when concerned.
- Parents can talk and see directly to the child through the audio and video feature.
- Both video and audio are securely recorded and stored for future reference.
- Access to the live stream is restricted to authorized individuals (parents or guardians) to protect the child's privacy.

**Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials and the parent's account is connected with child's account.

## **N. Restricting Usage**

### **Functional requirements:**

- Parents will be able to set a restriction for any website.
- Will be able to set time for kids how much time they will play games or do other multimedia activities.
- By using this app parents can set timer for using phone. (after 11 am phone will automatically lock)
- Parents can restrict social media uses for their kids as well.

**Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials and the parent's account is connected with child's account.

## **O. Last Location:**

### **Functional Requirements:**

- If somehow the users' locations turn off or maybe they are having a bad network or their phone turns off connection then the system tracks their last activities, visited areas.
- A report is also then sent to the respected parents.

**Priority level:** High.

**Precondition:** The user must create a valid account and login with valid credentials.