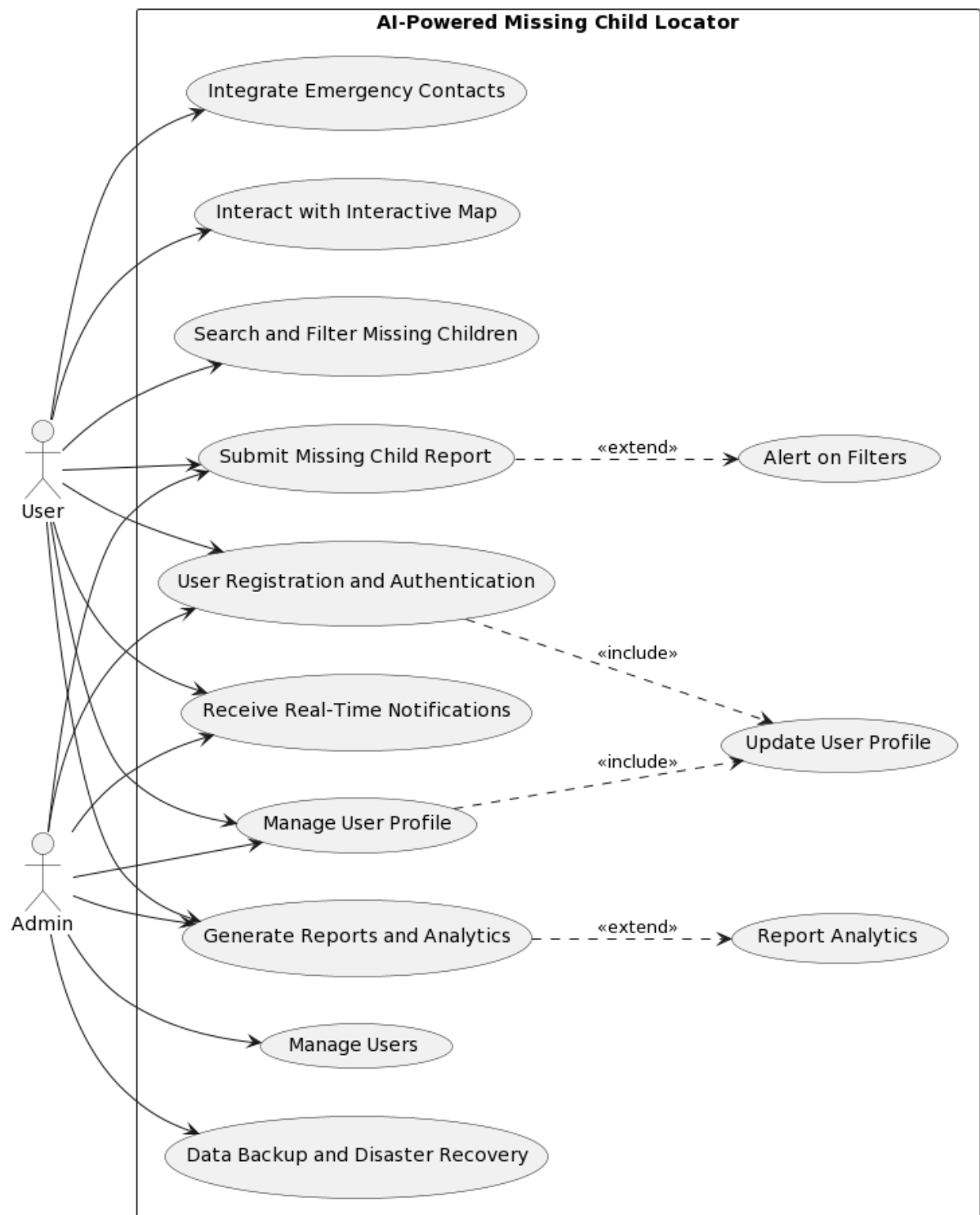
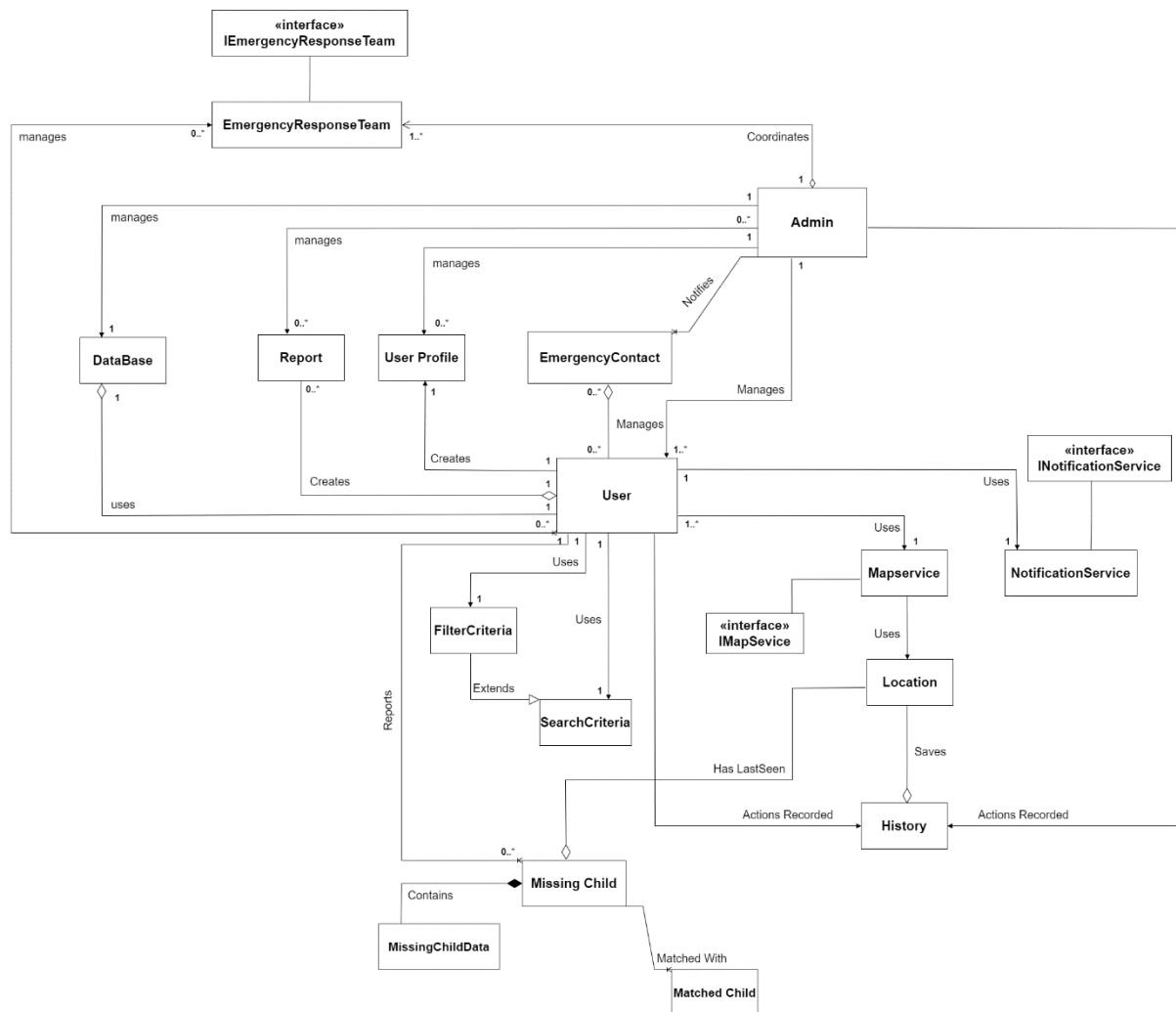


# USE CASE DIAGRAM:-



CLASS DIAGRAM:-



<div>Admin</div> <div> - adminId: int  - username: string  - password: string  - email: string </div> <div> + createAdminAccount(username: string, password: string, email: string): Admin  + login(username: string, password: string): boolean  + manageUserProfile(user: User)  + generateReportsAndAnalytics(): Report  + performDataBackupAndRecovery()  + manageUsers(users: List&lt;User&gt;)  + manageChildData(children: List&lt;MissingChild&gt;)  + assignToEmergencyResponseTeam(team: EmergencyResponseTeam)  + viewUserProfile(user: User): UserProfile  - isImplementedBy &gt; Admin : implements </div>	<div>DataBase</div> <div> - users: List&lt;User&gt;  - missingChildren: List&lt;MissingChild&gt;  - matchedChildren: List&lt;MatchedChild&gt; </div> <div> + addUser(user: User)  + addMissingChild(child: MissingChild)  + searchMissingChildren(criteria: FilterCriteria): List&lt;MissingChild&gt;  + updateMissingChildData(child: MissingChild)  + storeUserData(user: User)  + storeMissingChildData(child: MissingChild)  + storeMatchedChildData(matchedChild: MatchedChild)  + storeReport(report: Report)  - isImplementedBy &gt; Database : implements </div>
<div>User</div> <div> - userId: int  - username: string  - password: string  - email: string  - phone: string  - profileData: string </div> <div> + createUserAccount(username: string, password: string, email: string): User  + login(username: string, password: string): boolean  + updateProfile(username: string, password: string, email: string, phone: string, profileData: string)  + submitMissingChildReport(childData: MissingChildData): MissingChild  + receiveRealTimeNotifications(): List&lt;Notification&gt;  + searchMissingChildren(criteria: FilterCriteria): List&lt;MissingChild&gt;  + manageEmergencyContacts(contacts: List&lt;EmergencyContact&gt;)  + generateReportsAndAnalytics(): Report  + rateAndReviewChildSighting(sighting: MatchedChild)  + viewProfile(): UserProfile  + logAction(action: string, timestamp: date, user: User)  + notifyEmergencyContacts(emergencyContacts: List&lt;EmergencyContact&gt;)  + assignToEmergencyResponseTeam(team: EmergencyResponseTeam)  - isImplementedBy &gt; User : implements </div>	<div>EmergencyResponseTeam</div> <div> - teamID: int  - teamName: string  - members: User[] </div> <div> + assignTeamMembers (members: User[]): void  + respondToEmergency(): void </div>
<div>FilterCriteria</div> <div> - location: string  - age: int  - gender: string  - date: date  - status: string </div> <div> + setFilters(location: string, age: int, gender: string, date: date, status: string)  + getFilters(): FilterCriteria </div>	<div>History</div> <div> - historyID: int  - description: string  - date: date </div> <div> + logAction(action: string, timestamp: date, user: User) </div>
<div>&lt;&lt;Interface&gt;&gt; IEmergencyResponseTeam</div> <div> + assignTeamMembers(members: List&lt;User&gt;)  + respondToEmergency()  - isImplementedBy &gt; EmergencyResponseTeam : implements </div>	<div>&lt;&lt;Interface&gt;&gt; IMapService</div> <div> + displayMap(location: Location)  - isImplementedBy &gt; MapService : implements </div>
<div>&lt;&lt;Interface&gt;&gt; INotificationService</div> <div> + sendNotification(user: User, message: string): Notification  + storeNotification(notification: Notification)  - isImplementedBy &gt; NotificationService : implements </div>	<div>Location</div> <div> - locationID: int  - latitude: double  - longitude: double </div> <div> + getLocationDetails(): LocationDetails </div>

MissingChild	MissingChildData
<ul style="list-style-type: none"> <li>- childId: int</li> <li>- childData: MissingChildData</li> <li>- reportedBy: User</li> <li>- foundBy: Admin</li> <li>- status: string</li> </ul>	<ul style="list-style-type: none"> <li>- childName: string</li> <li>- dateOfBirth: date</li> <li>- photo: image</li> <li>- location: string</li> <li>- Age : int</li> </ul>
<ul style="list-style-type: none"> <li>+ viewDetails(): MissingChildData</li> <li>+ addMatchedChild(match: MatchedChild)</li> <li>+ updateStatus(status: string)</li> </ul>	

MatchedChild
<ul style="list-style-type: none"> <li>- matchId: int</li> <li>- missingChild: MissingChild</li> <li>- foundChild: MissingChild</li> <li>- matchConfidence: double</li> <li>- reportedMatchedBy: User</li> <li>- foundMatchedBy: Admin</li> </ul>
<ul style="list-style-type: none"> <li>+ createMatch(missingChild: MissingChild, foundChild: MissingChild, matchConfidence: double): MatchedChild</li> <li>+ getMatchesForMissingChild(missingChild: MissingChild): List&lt;MatchedChild&gt;</li> </ul>

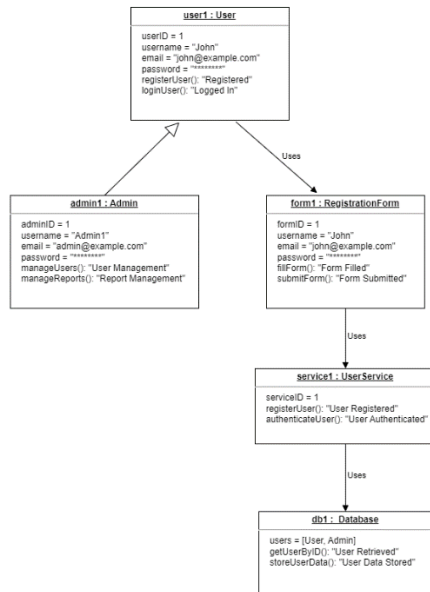
Notification Service	SearchCriteria
<ul style="list-style-type: none"> <li>- notifications: List</li> </ul>	<ul style="list-style-type: none"> <li>- name: string</li> <li>- age: int</li> <li>- location: string</li> <li>- description: string</li> </ul>
<ul style="list-style-type: none"> <li>+ sendNotification(user: User, message: string): Notification</li> <li>+ storeNotification(notification: Notification): void</li> </ul>	<ul style="list-style-type: none"> <li>+ setCriteria(name: string, age: int, location: string, description: string)</li> <li>+ getCriteria(): SearchCriteria</li> </ul>

Report	UserProfile
<ul style="list-style-type: none"> <li>- reportID: int</li> <li>- userID: int</li> <li>- date: date</li> <li>- description: string</li> <li>- status: string</li> </ul>	<ul style="list-style-type: none"> <li>- profileID: int</li> <li>- firstName: string</li> <li>- lastName: string</li> <li>- age: int</li> <li>- bio: string</li> <li>- location: string</li> <li>- description: string</li> </ul>
<ul style="list-style-type: none"> <li>+ createReport(user: User, description: string): Report</li> <li>+ updateStatus(status: string)</li> <li>+ storeReport(report: Report)</li> </ul>	<ul style="list-style-type: none"> <li>+ updateProfile(user: User)</li> </ul>

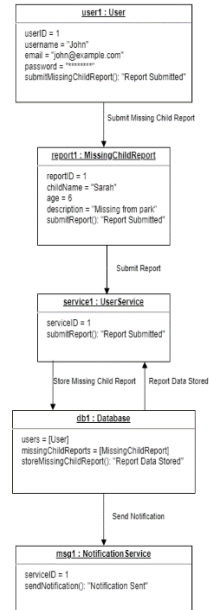
EmergencyContact	Map Service
<ul style="list-style-type: none"> <li>- contactID: int</li> <li>- name: string</li> <li>- relationship: string</li> <li>- phoneNumber: string</li> </ul>	<ul style="list-style-type: none"> <li>- mapData: MapData</li> </ul>
	<ul style="list-style-type: none"> <li>+ displayMap(location: Location): void</li> <li>+ updateMapData(data: MapData): void</li> </ul>

## OBJECT DIAGRAM:-

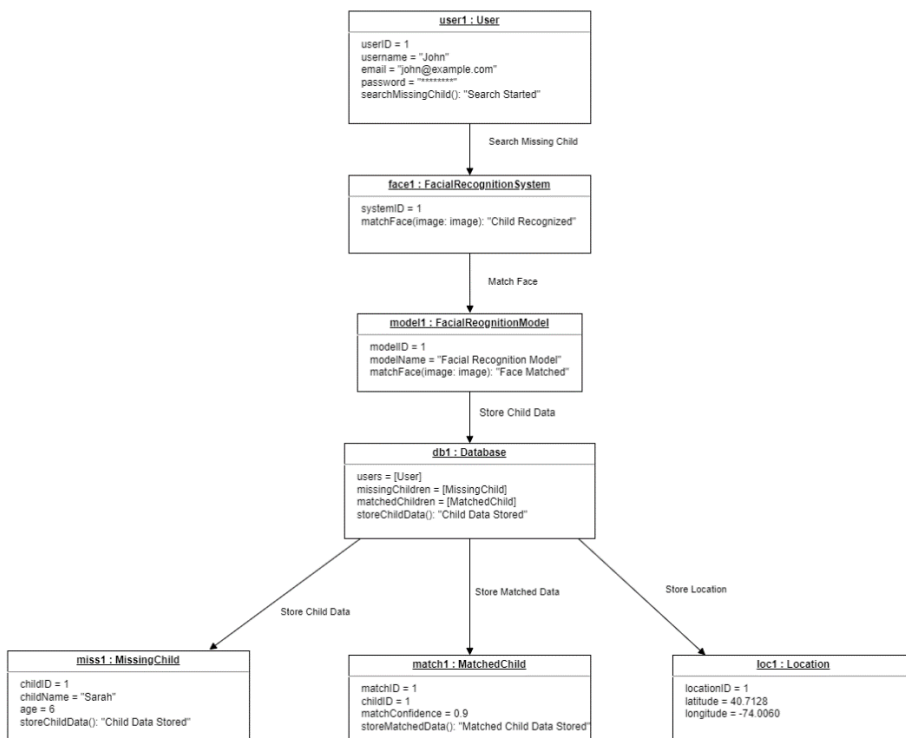
FR1:- User Registration and Authentication



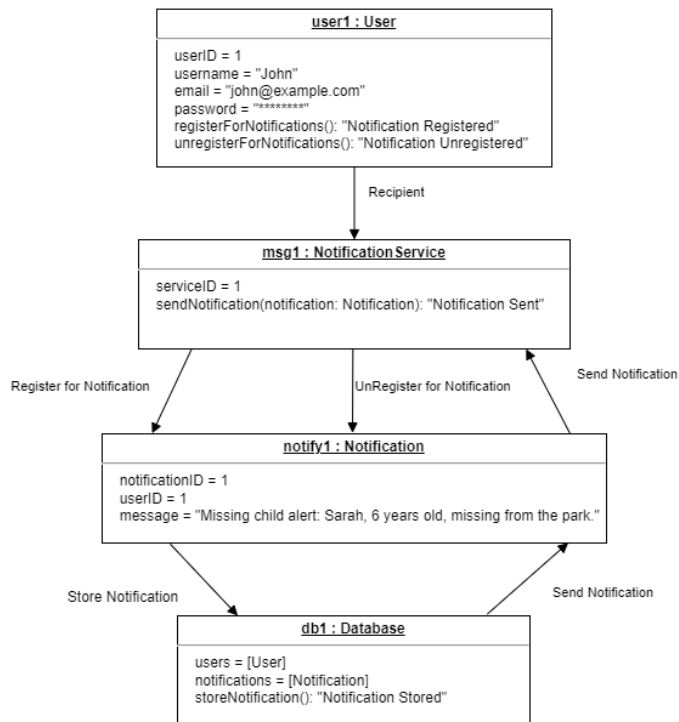
FR2:- Missing Child Report Submission



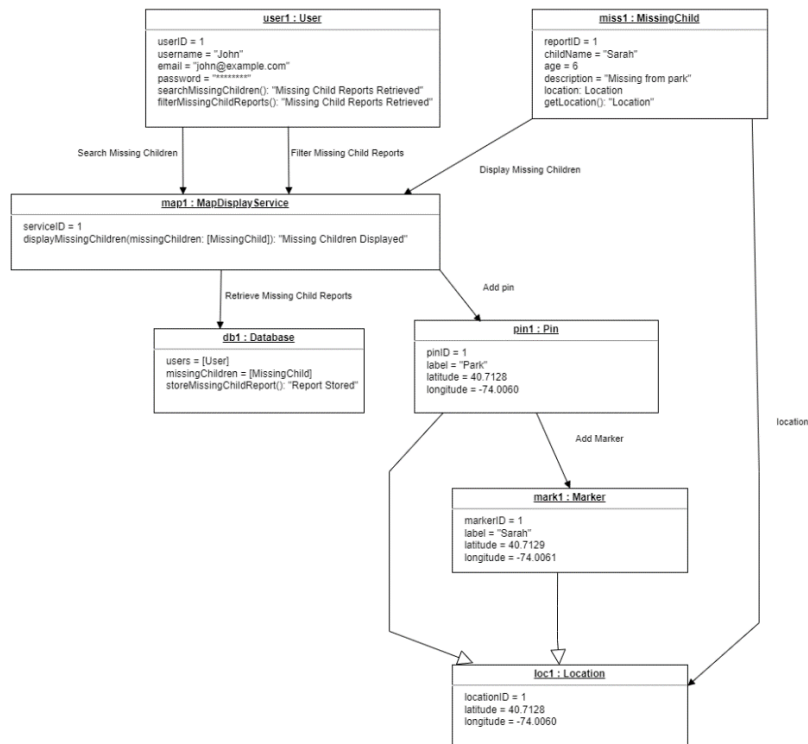
FR3:- Facial Recognition Matching



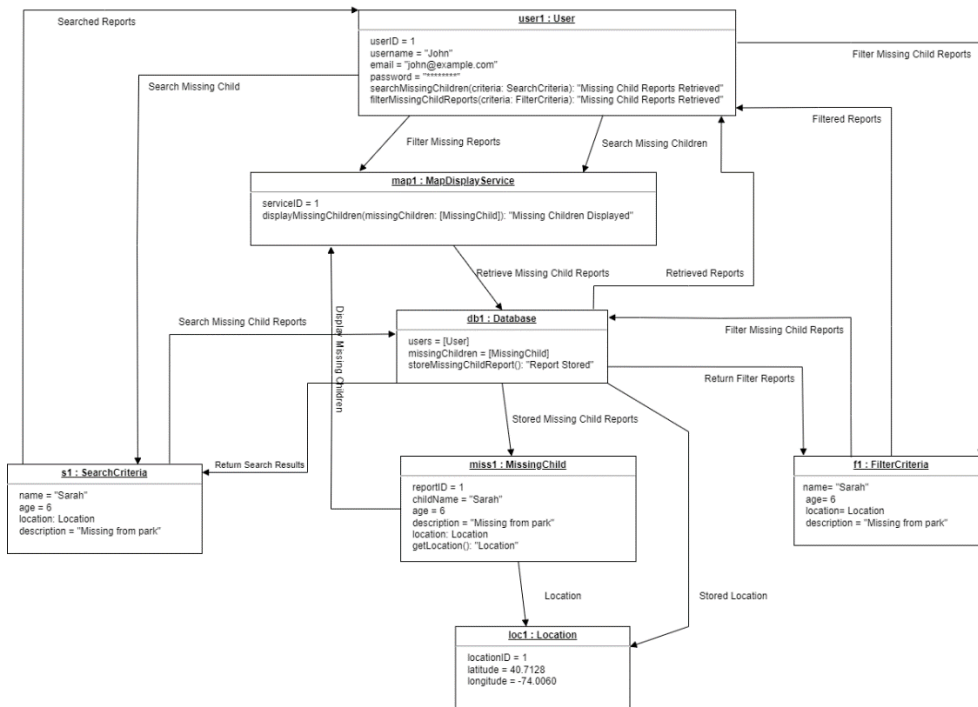
#### FR4:- Real-Time Notifications



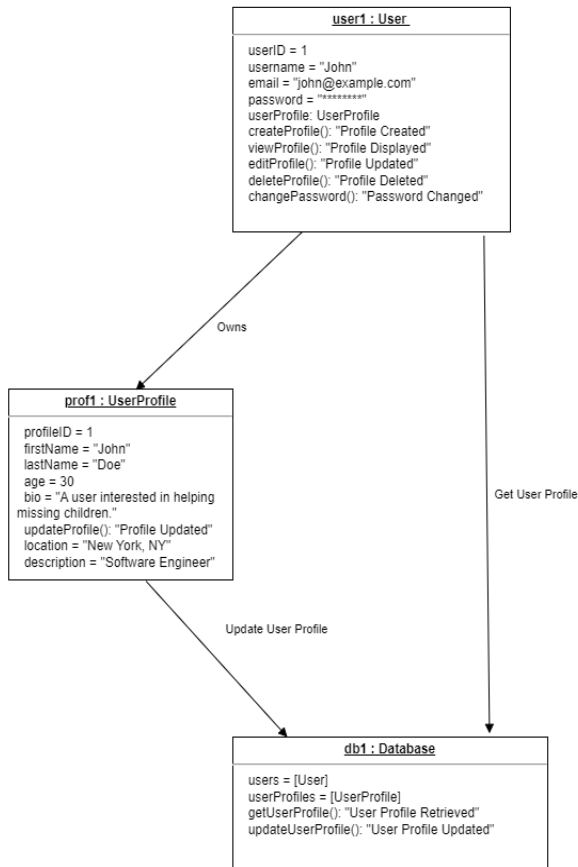
#### FR5:- Interactive Map Display



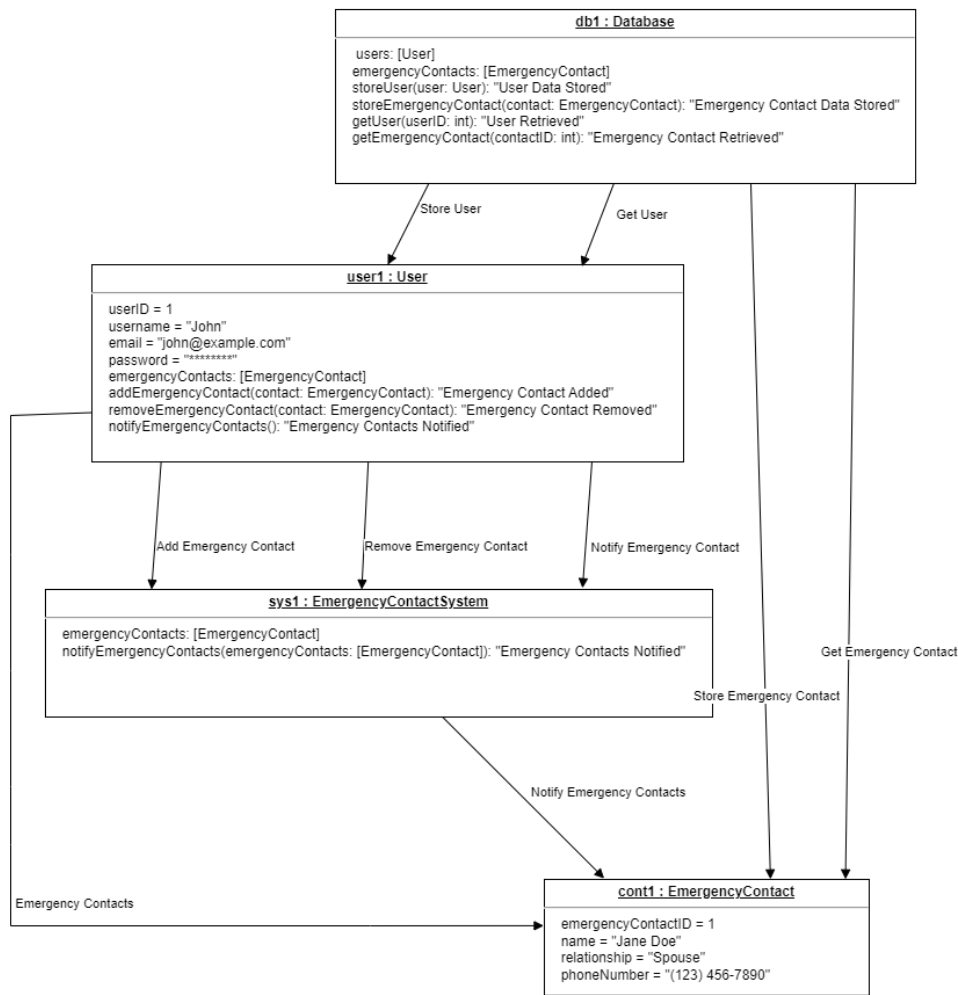
# FR6:- Search and Filter Functionality



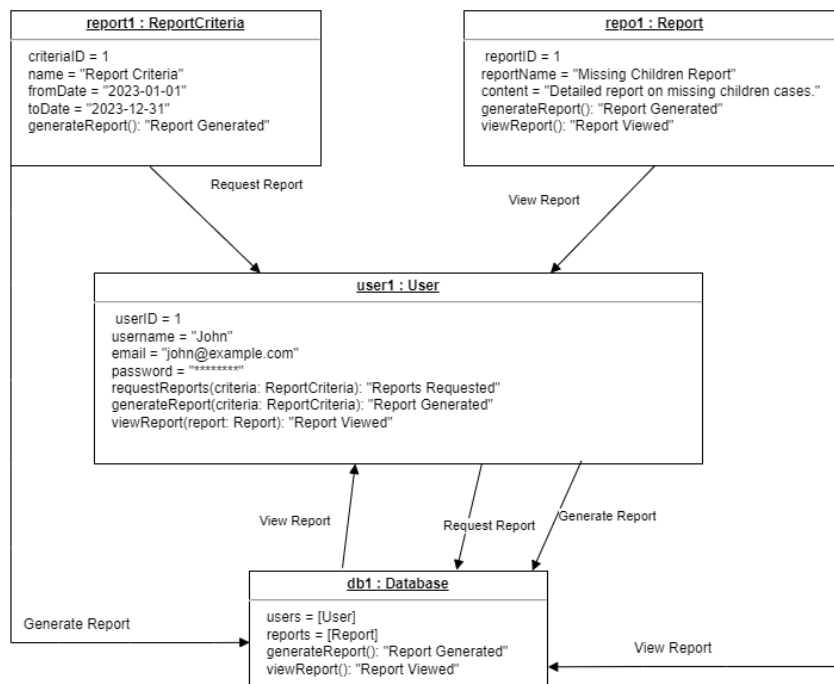
# FR7:- Profile Management



# FR8 :- Emergency Contacts Integration

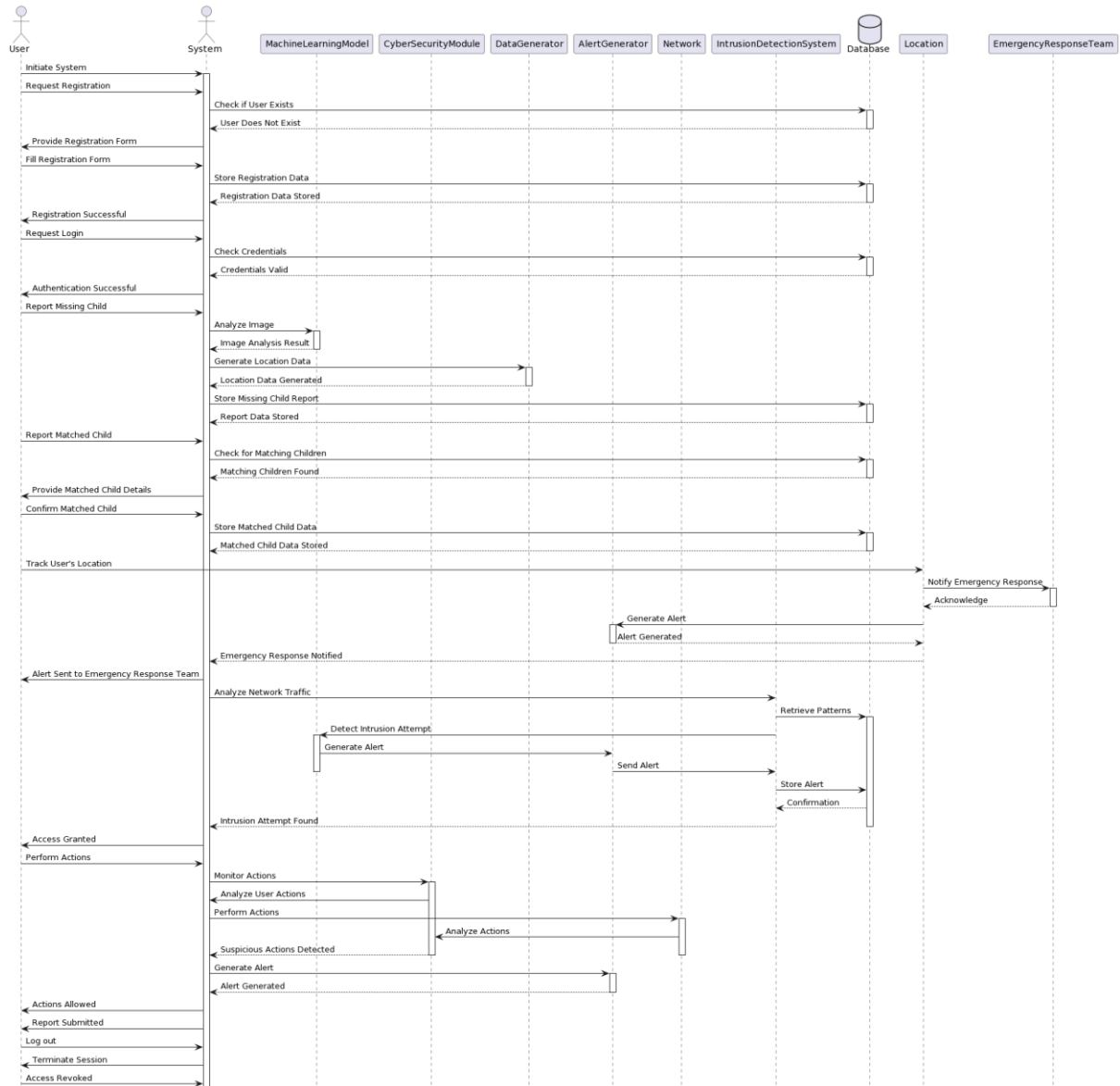


# FR9 :- Reporting and Analytics

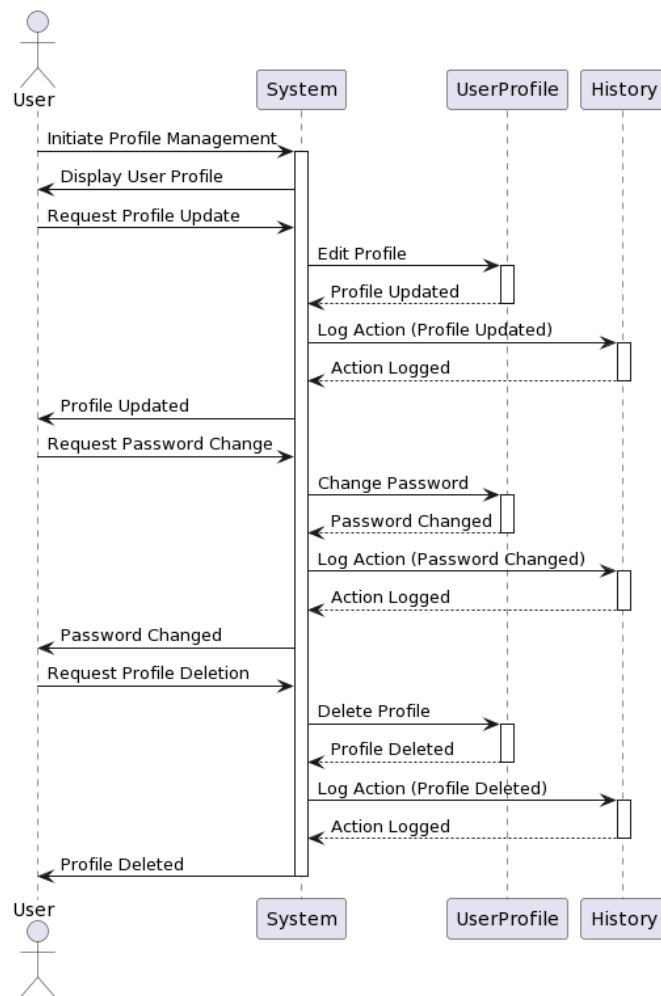




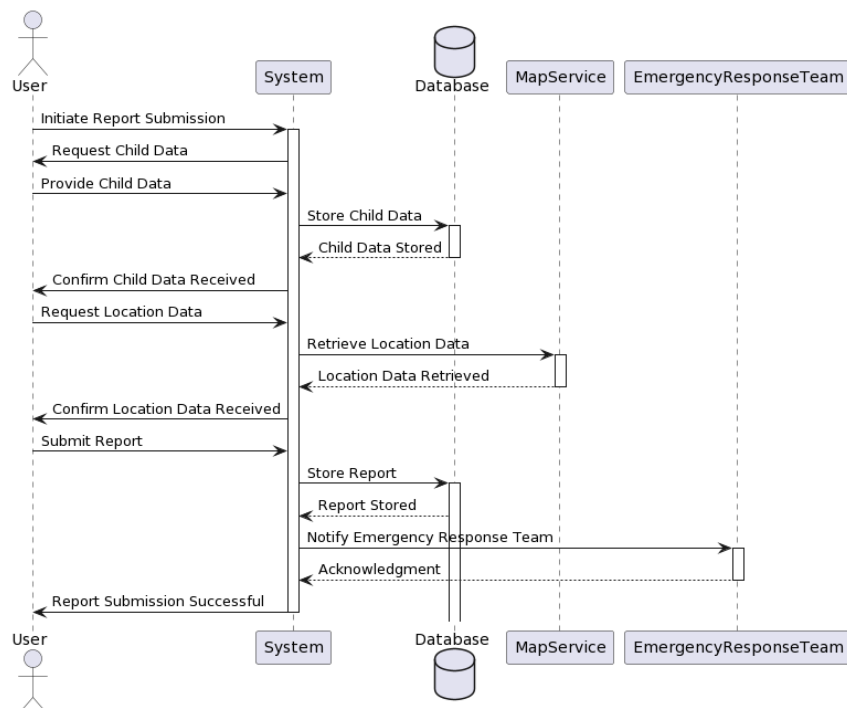
## SEQUENCE DIAGRAMS:-



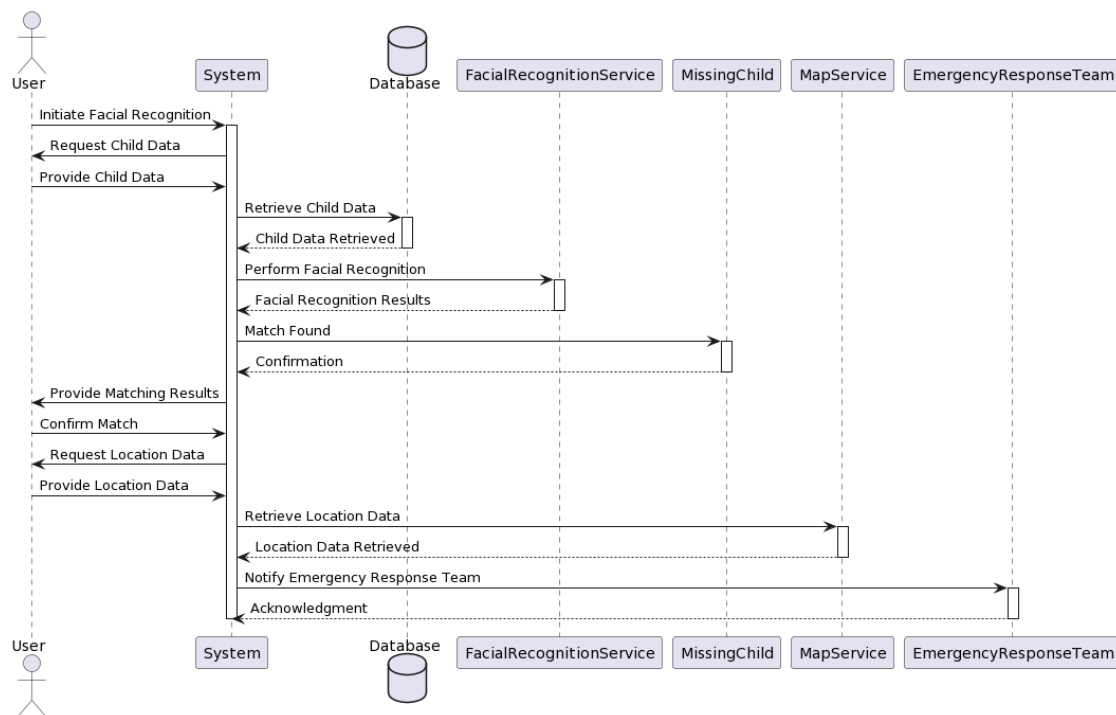
F1:-



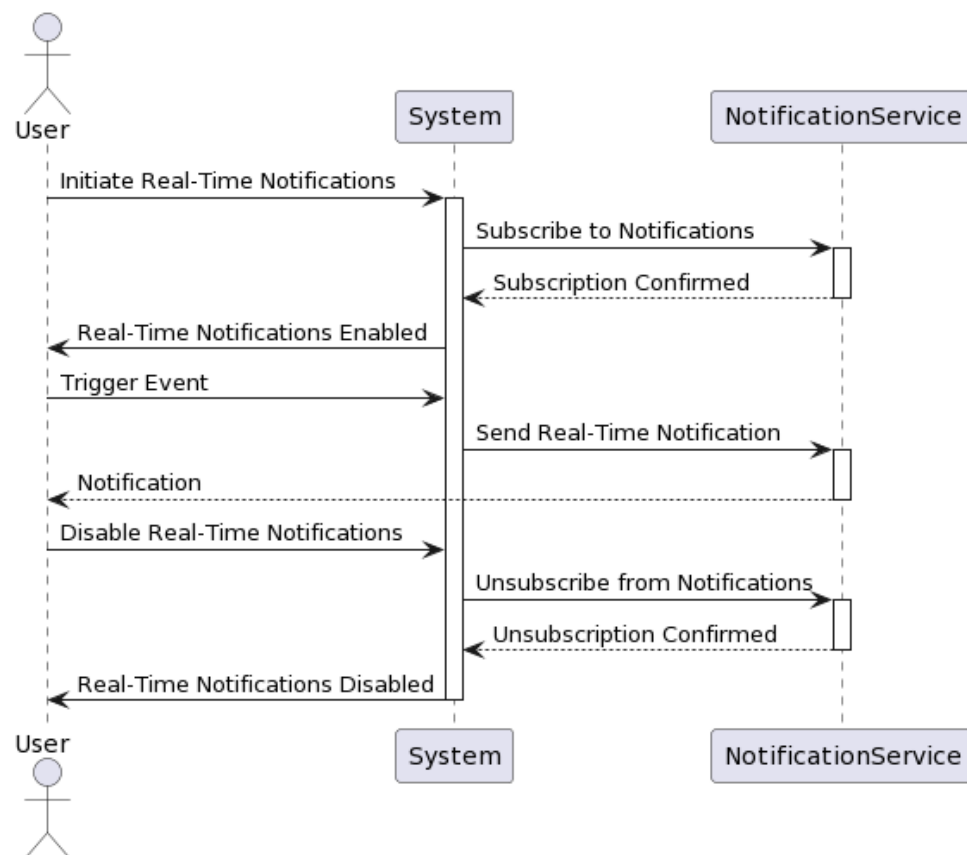
F2:-



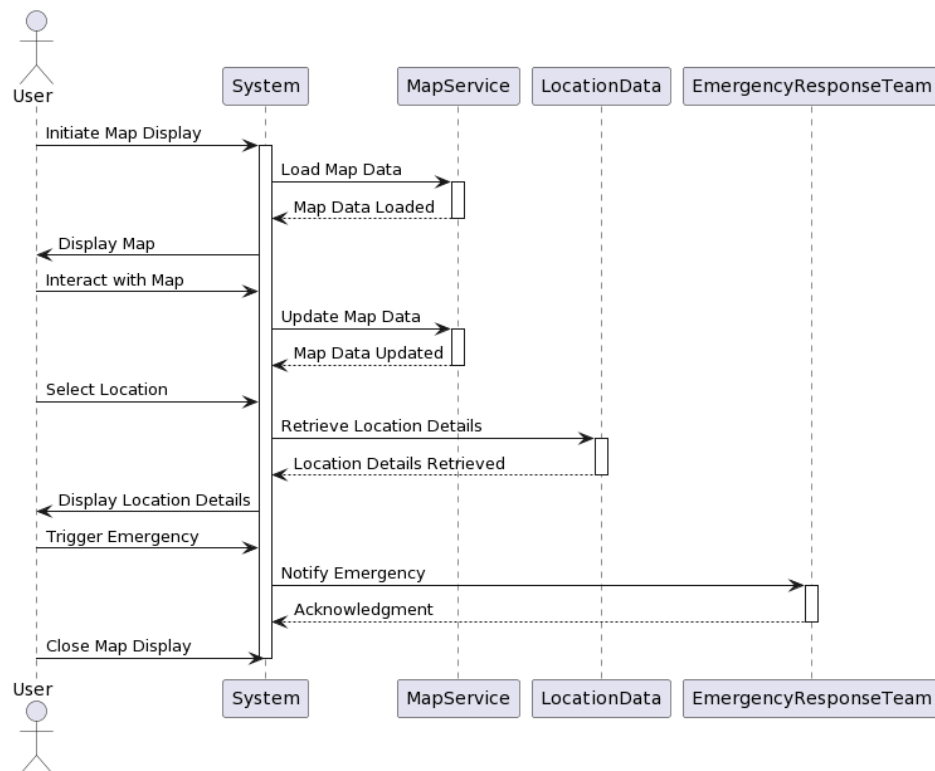
F3:-



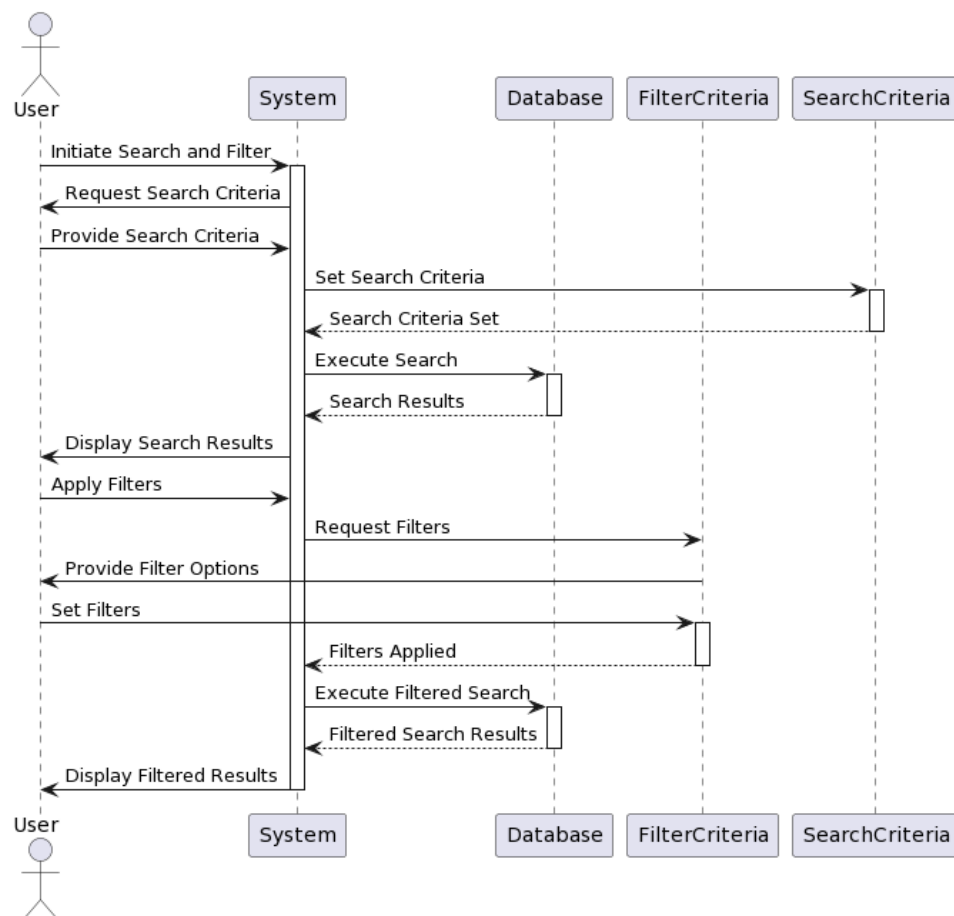
F4:-



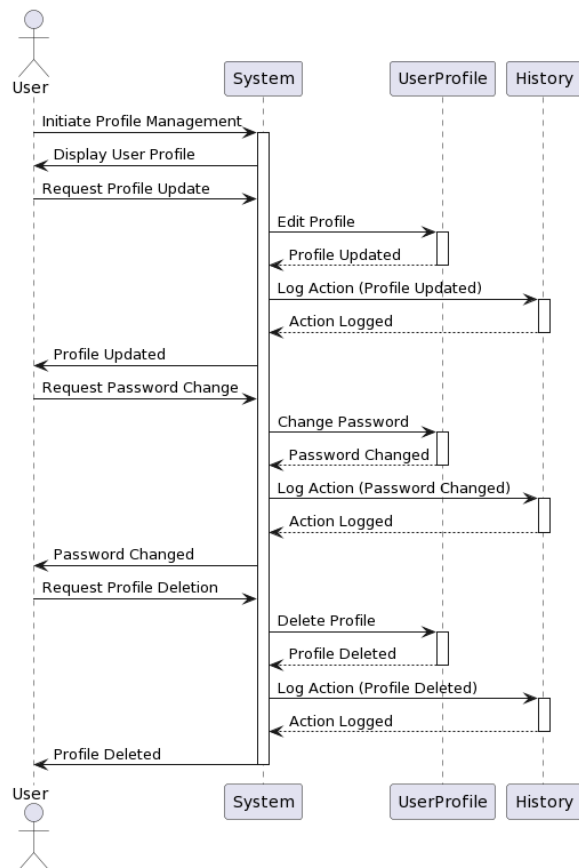
F5:-



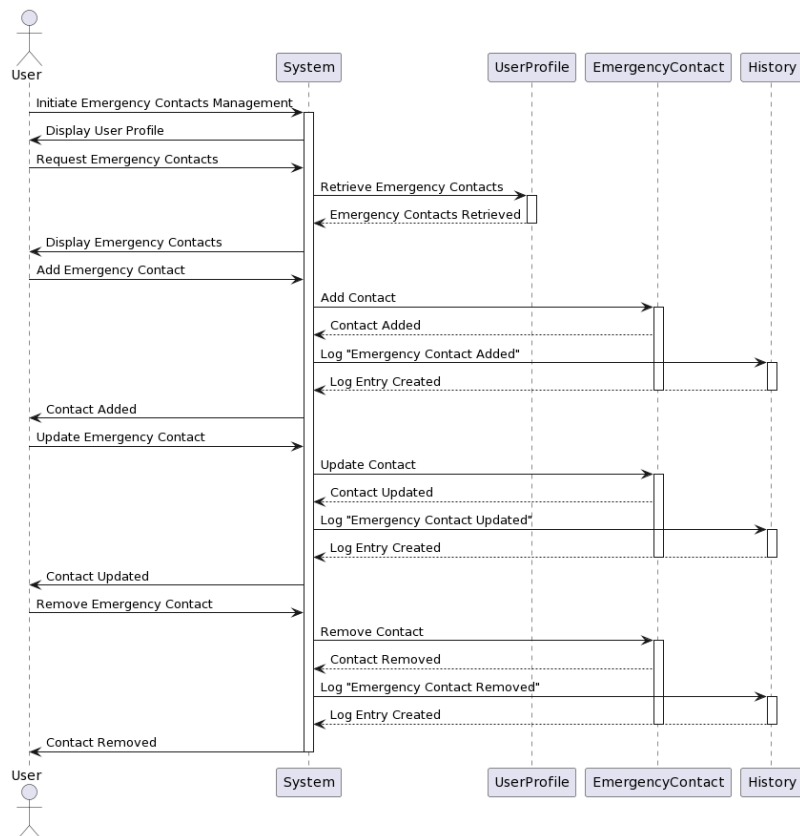
F6:-



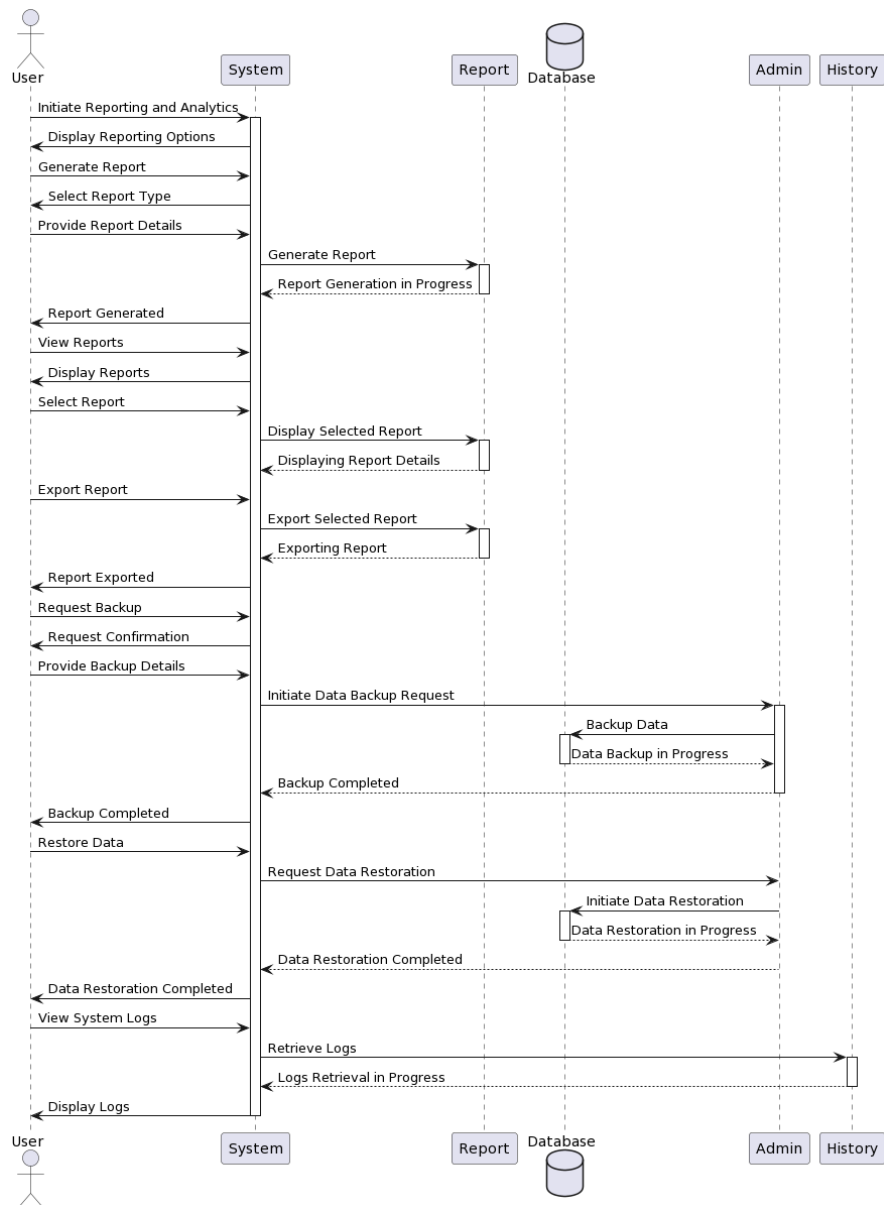
F7:-



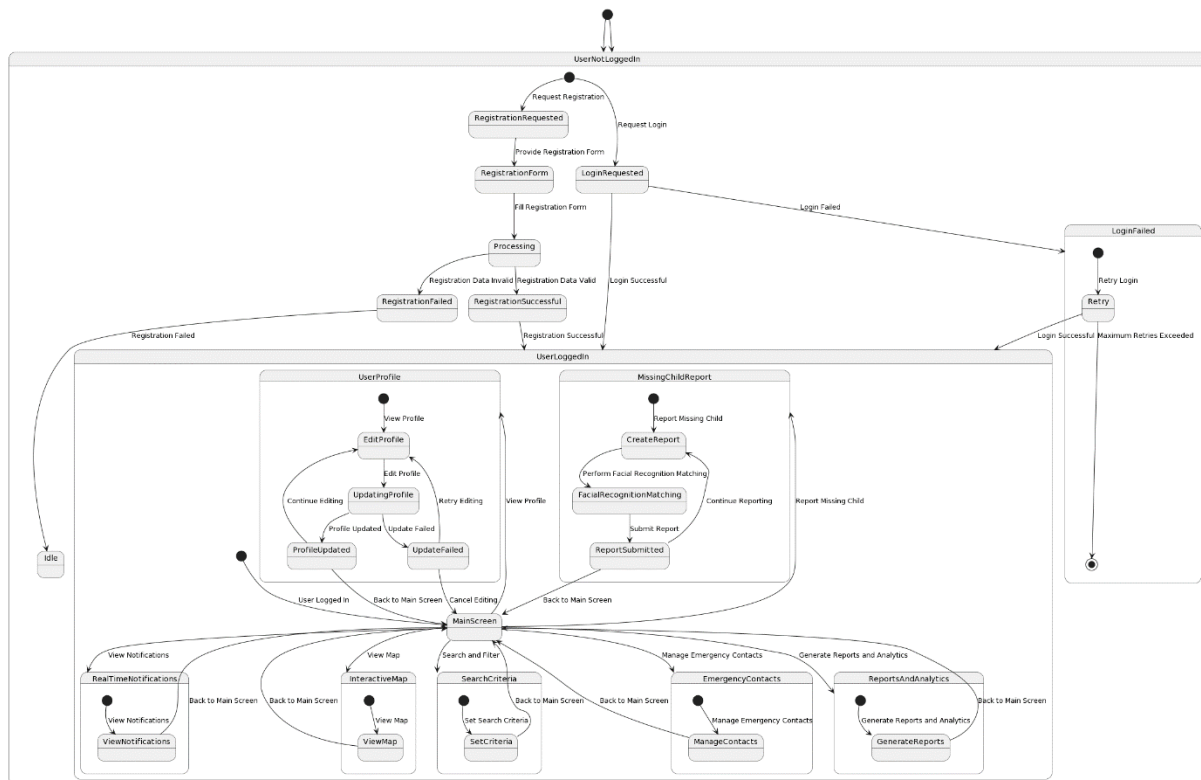
F8:-



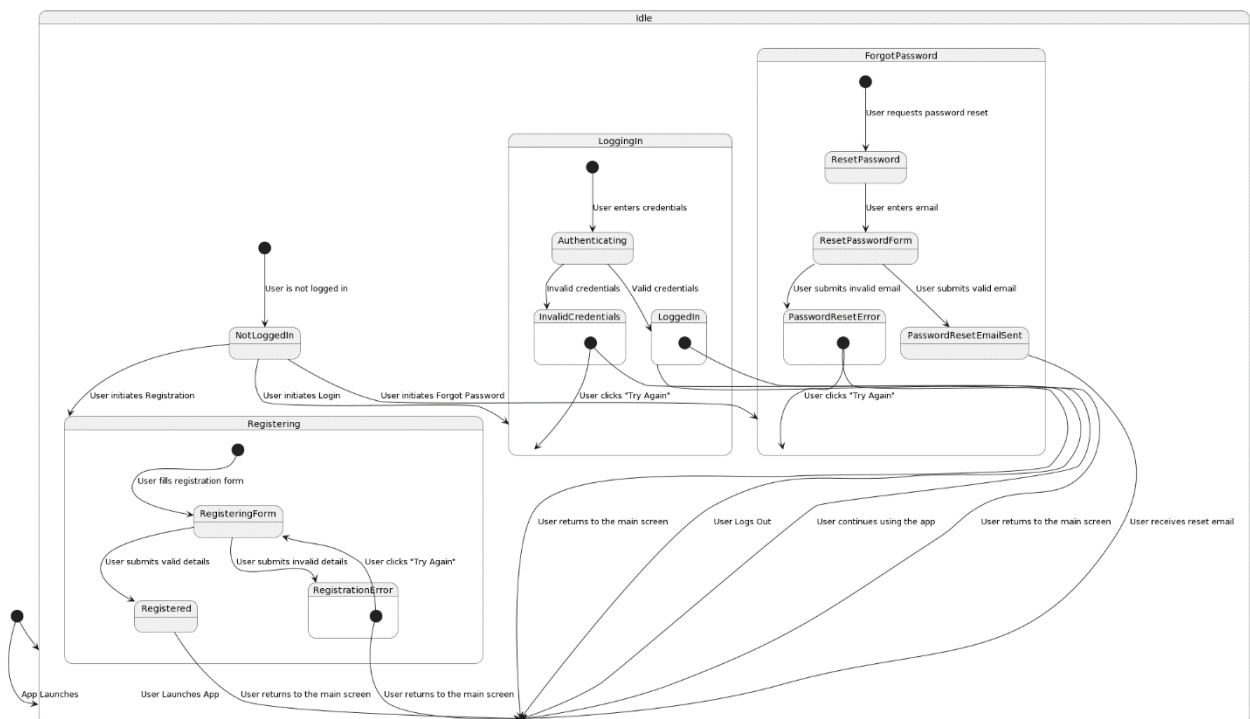
F9:-



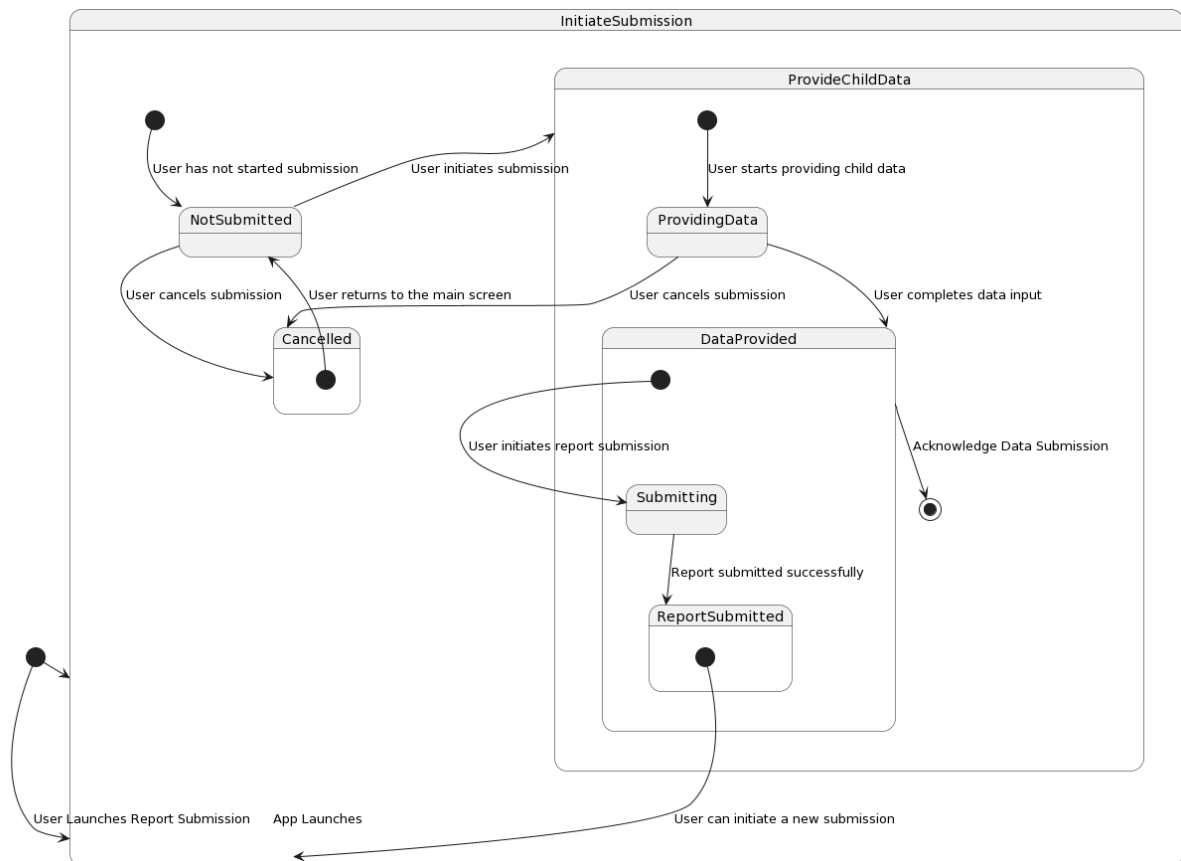
## STATE – CHART DIAGRAM:-



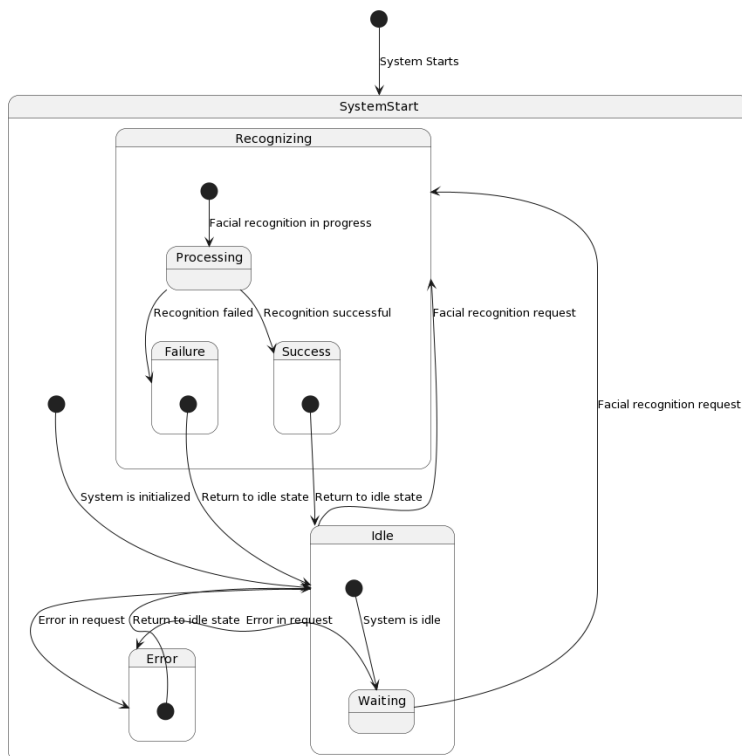
## F1:-



F2:-

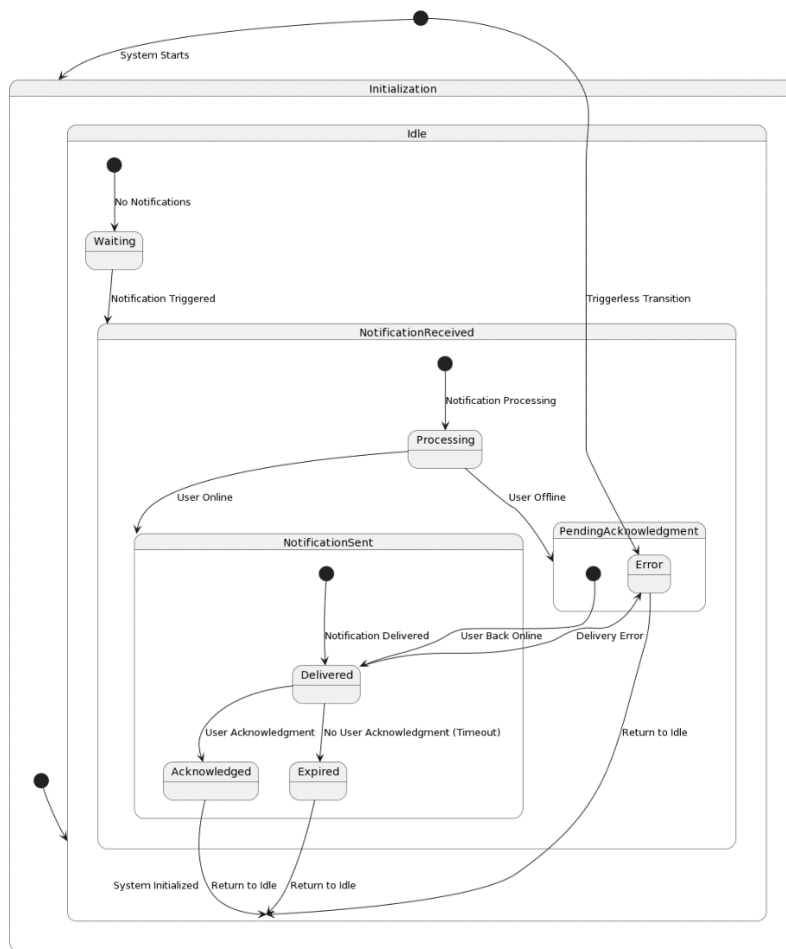


F3:-

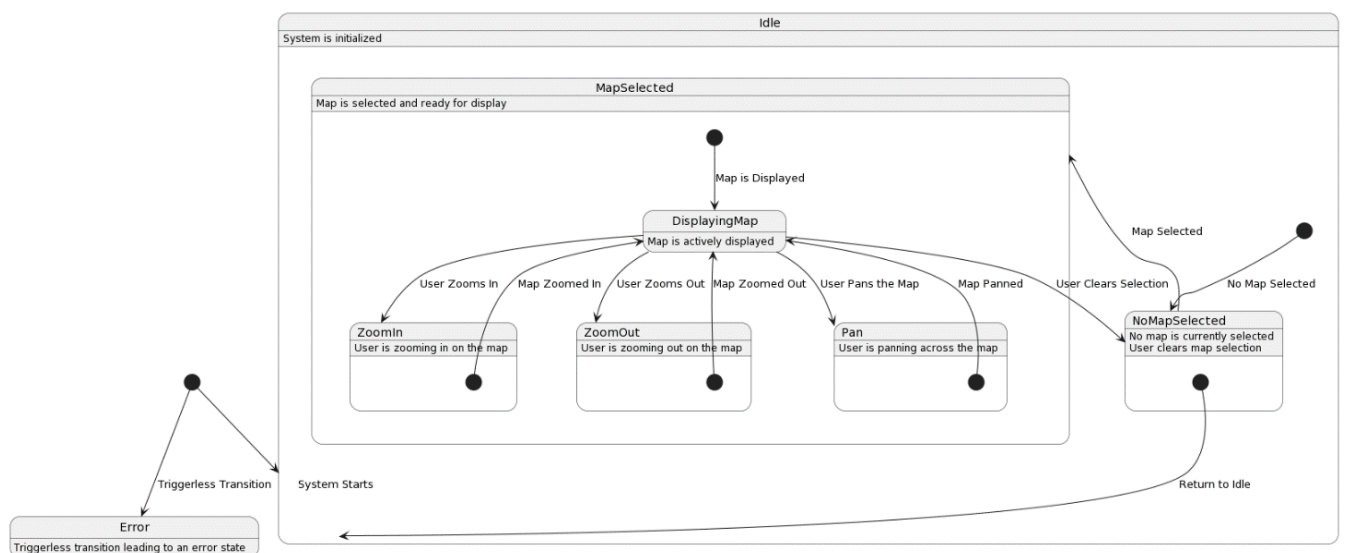




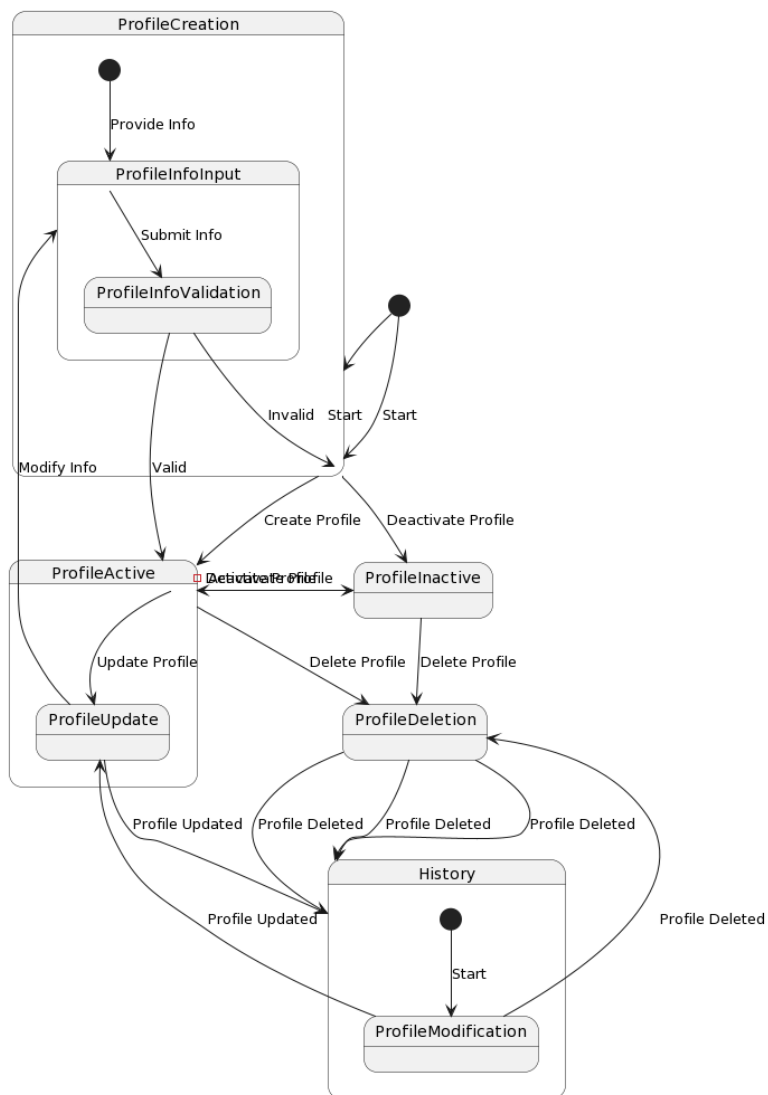
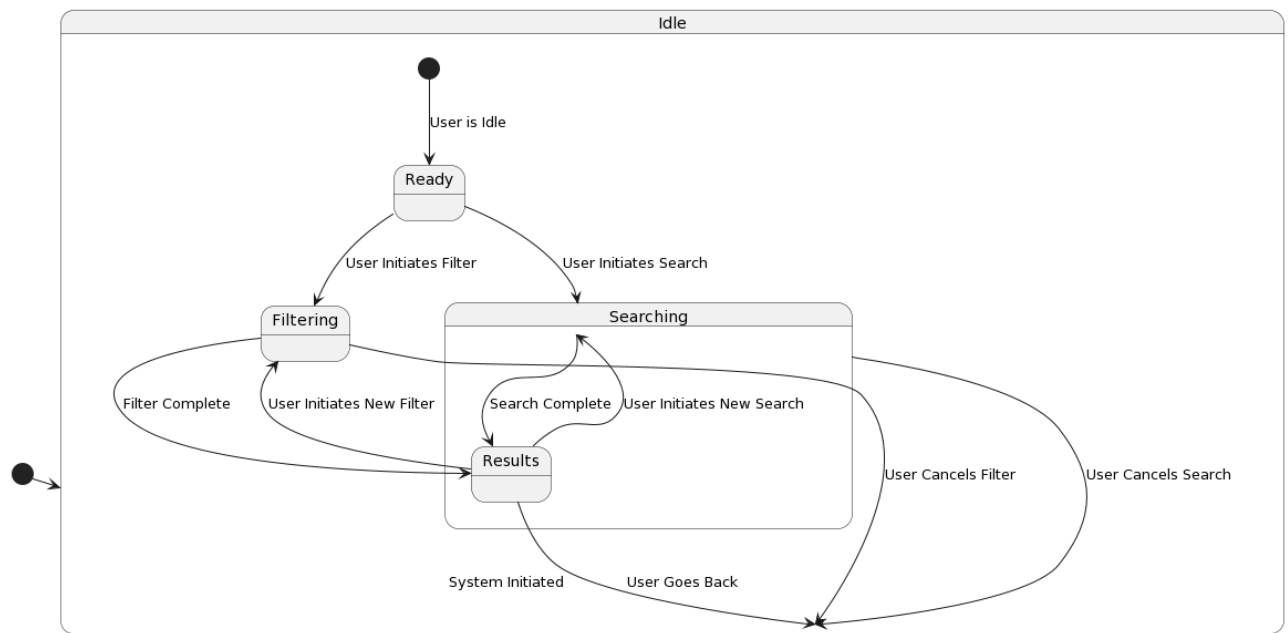
F4:-



F5:-

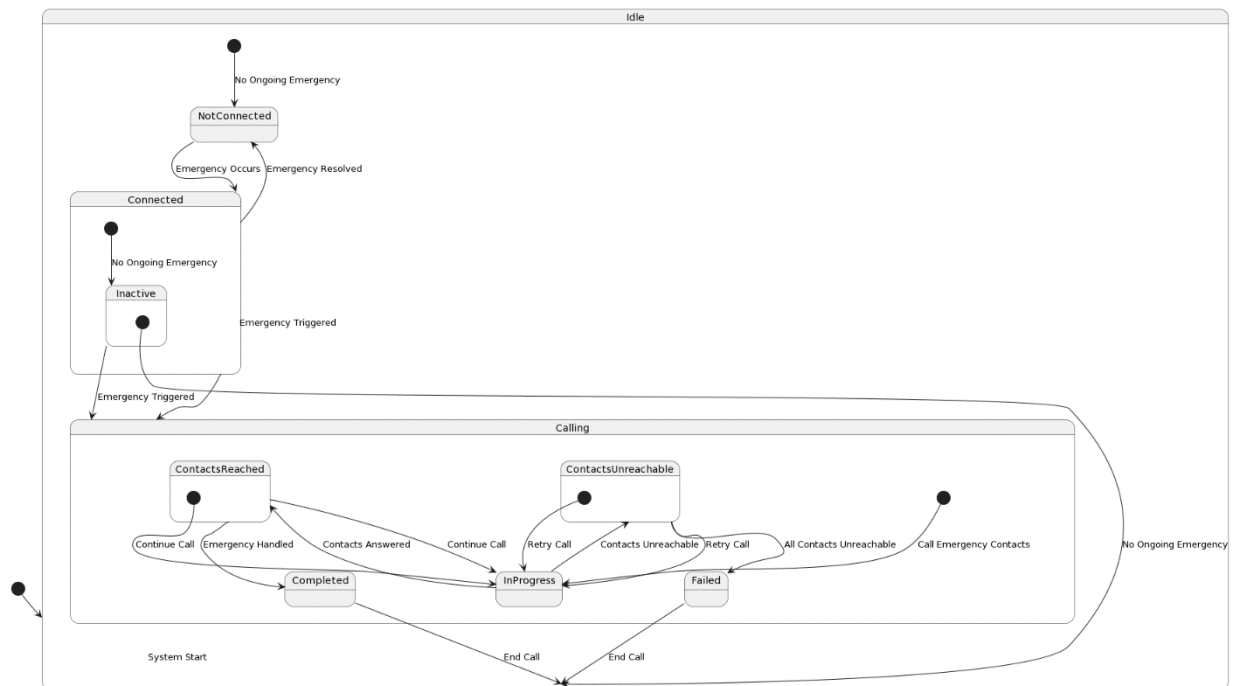


F6:-



F7:-

F8:-



F9:-

