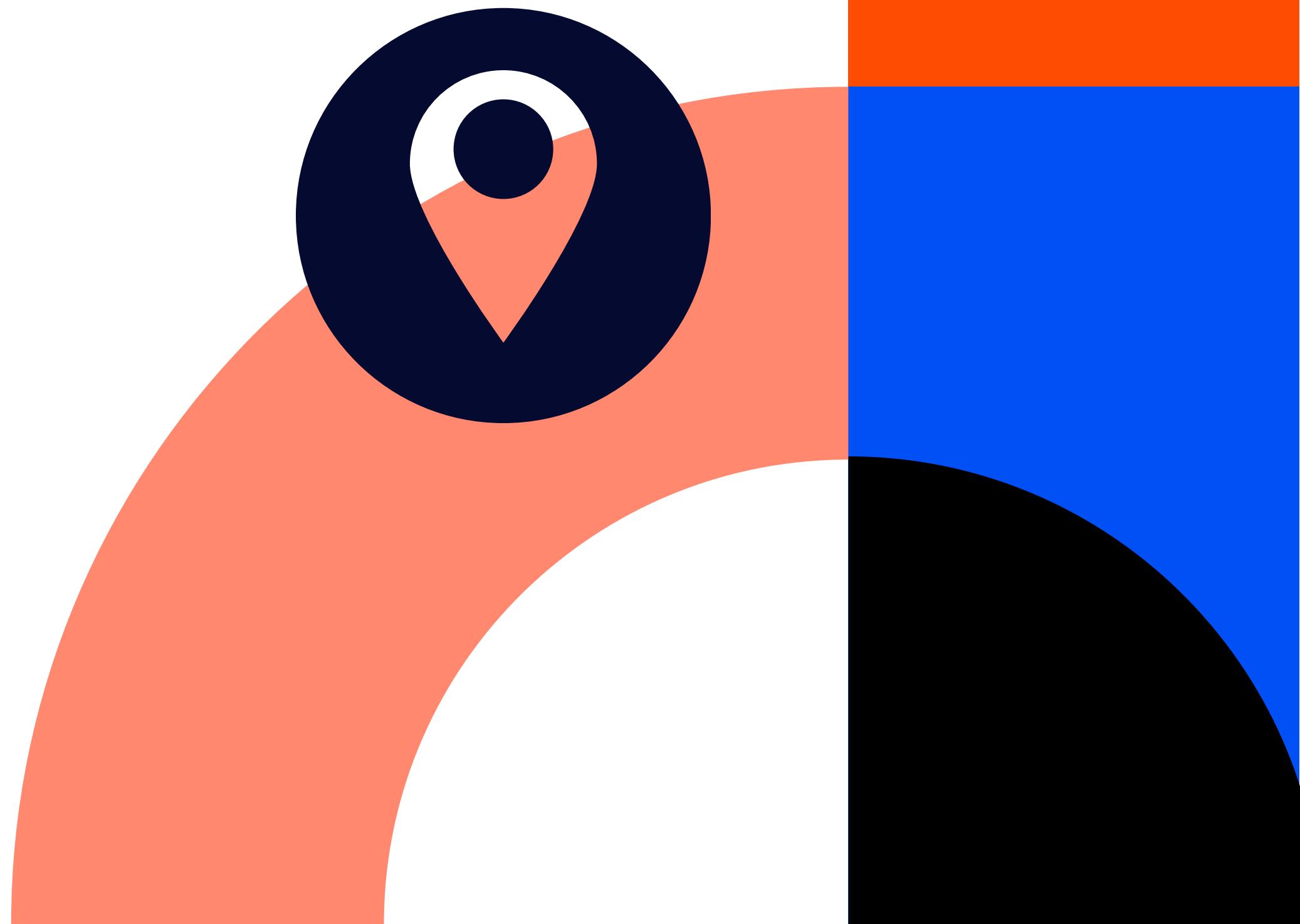


E-ksena

AI-Driven Emergency
Scene Recognition

ALT_RUN



ALT_RUN

Our Team



Peter Arquines

3rd Year College -
Bachelor of Science in
Computer Science -
Specializing in Software
and Systems



**Lance Benedict
Onnagan**

3rd Year College -
Bachelor of Science in
Computer Science -
Specializing in Software
and Systems



**Jesmark David
Presbitero**

3rd Year College -
Bachelor of Science in
Computer Science -
Specializing in Software
and Systems



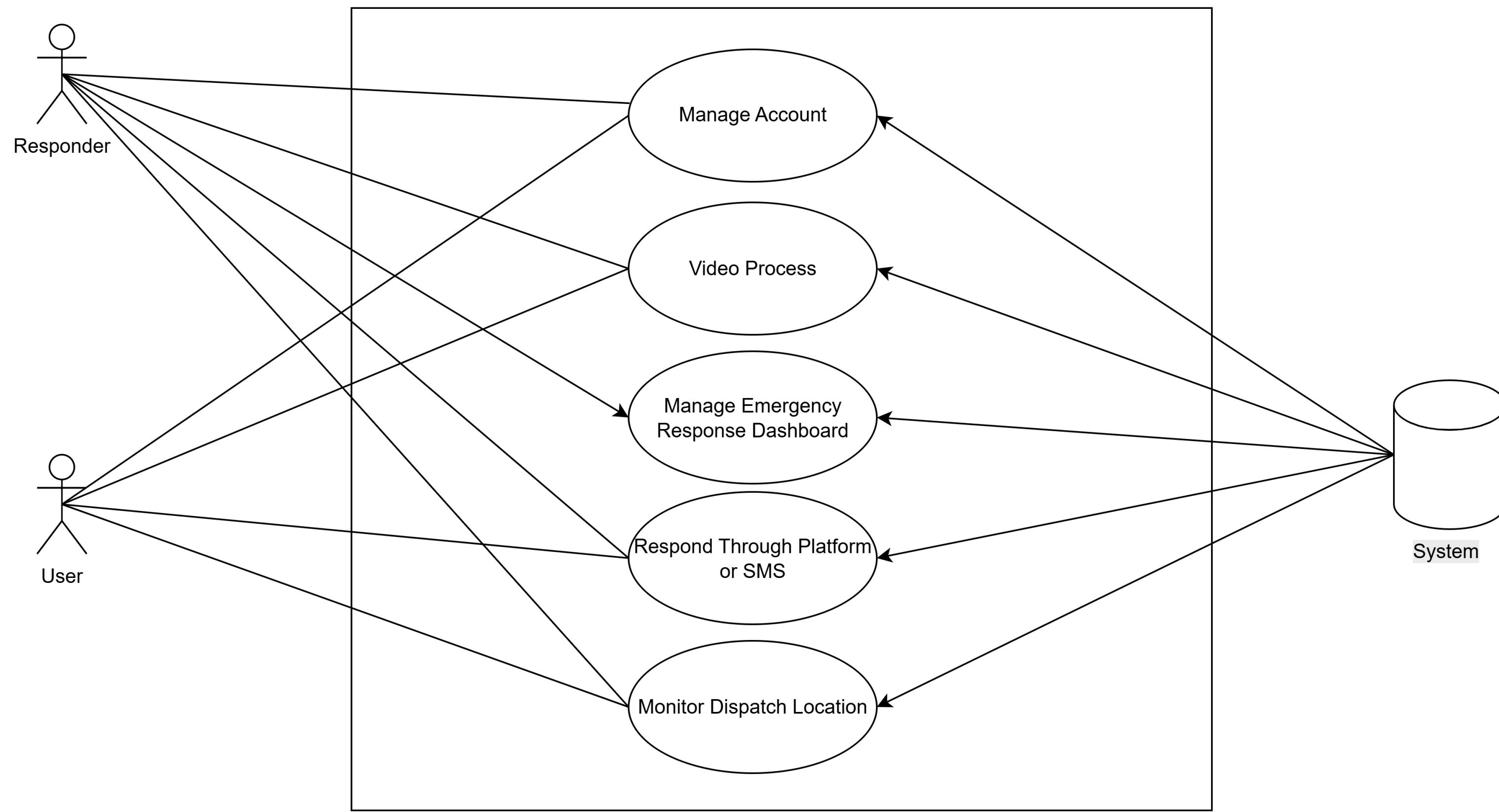
**Paul Brian
Sumilhig**

3rd Year College -
Bachelor of Science in
Computer Science -
Specializing in
Software and Systems

Comment Matrix

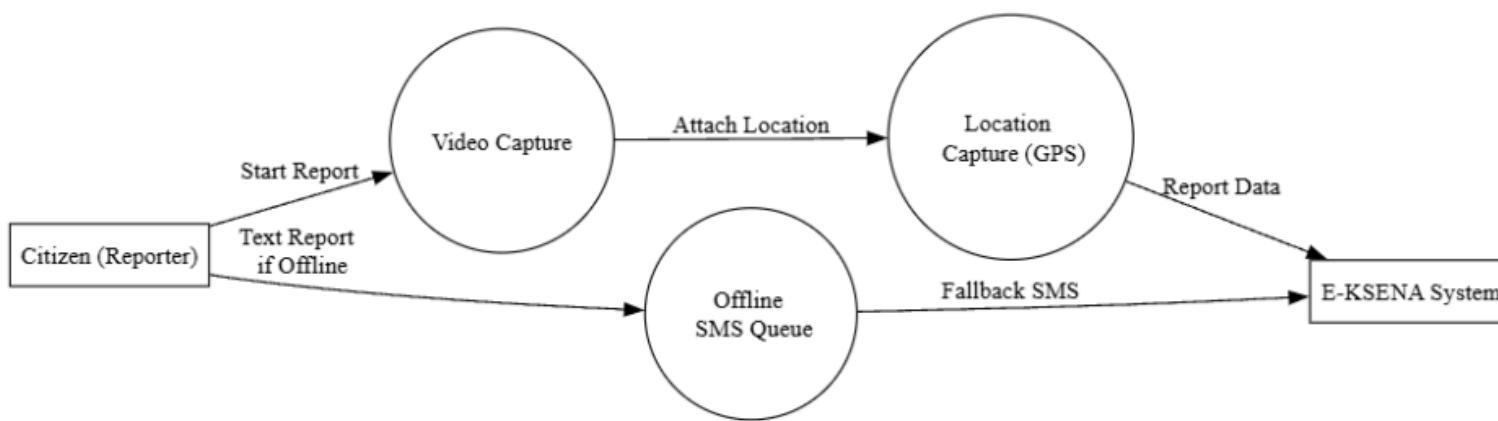
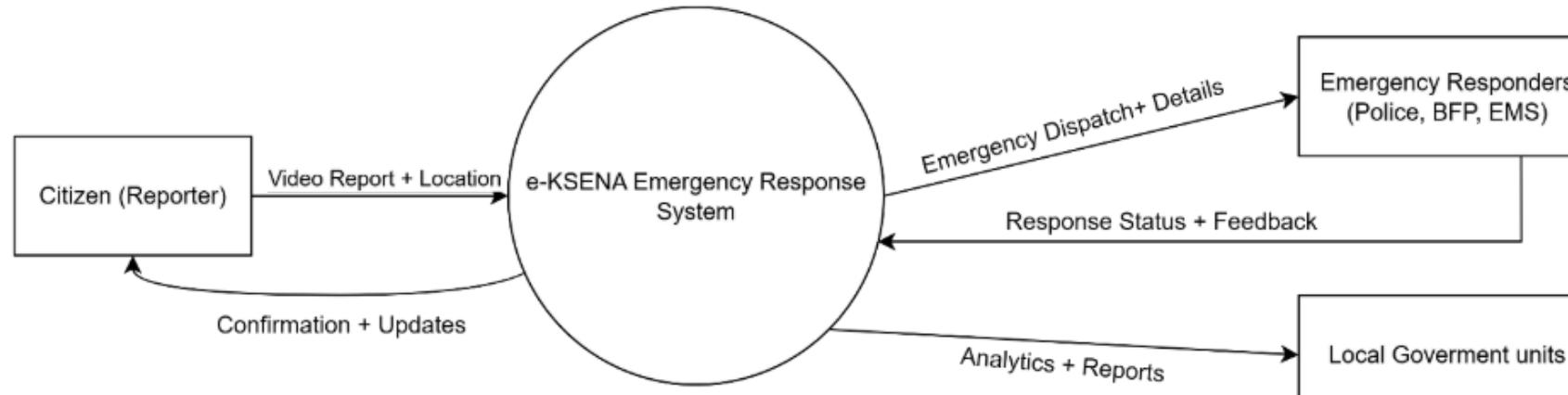
- DFD (Data Flow Diagram): Reformatted for clarity and consistency; aligned data flow with the ERD and main processes.
- UCD (Use Case Diagram): Updated to include all user roles (Citizen, Responder, Admin) and new features like AI analysis, offline mode, and dispatch tracking.
- Design Thinking: Interviewee not from Makati — noted as a limitation; future interviews will focus on Makati-based respondents for better relevance.

Use Case Diagram

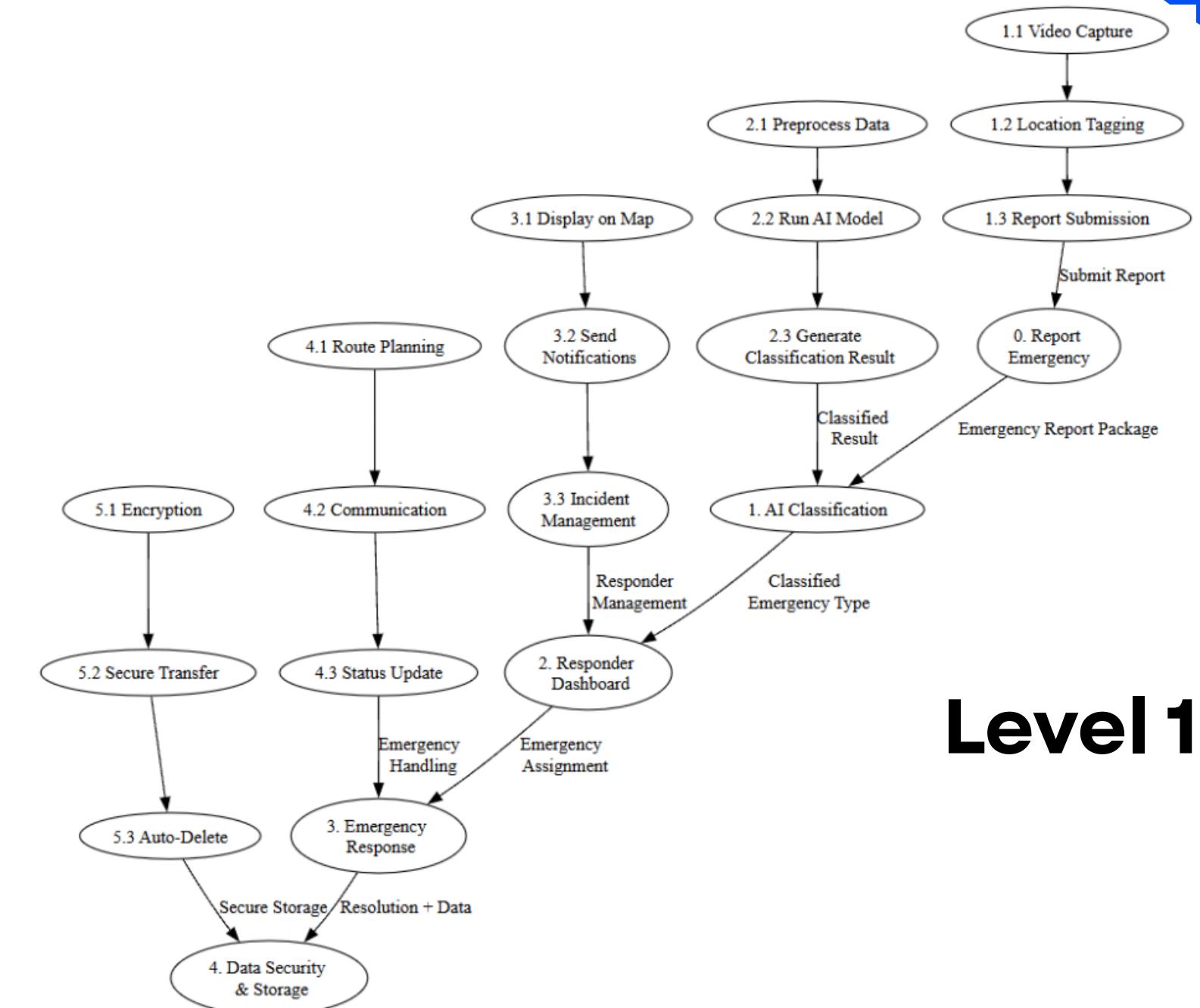


Data Flow Diagram

Level 0



Level 2

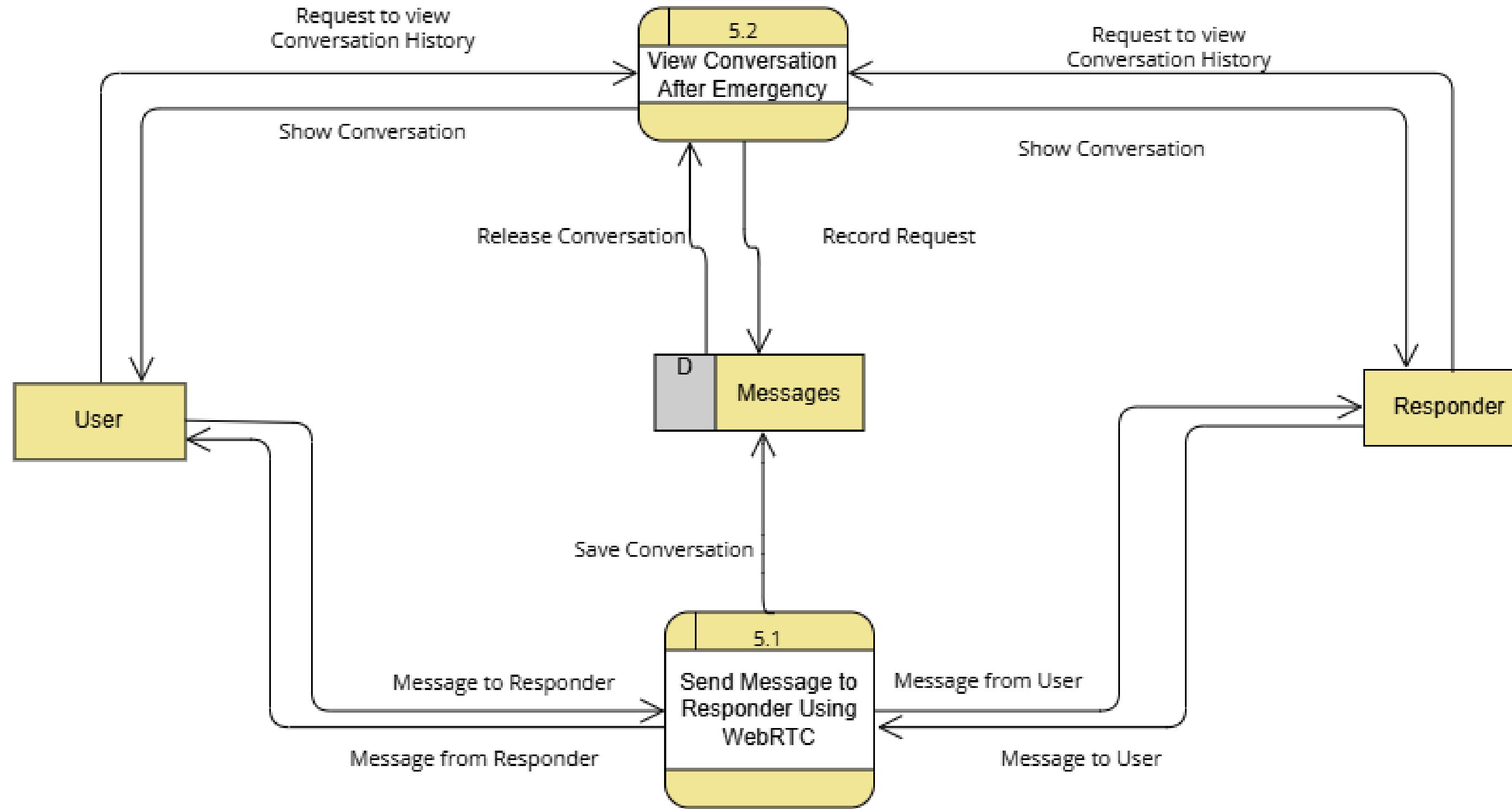


Level 1

Before

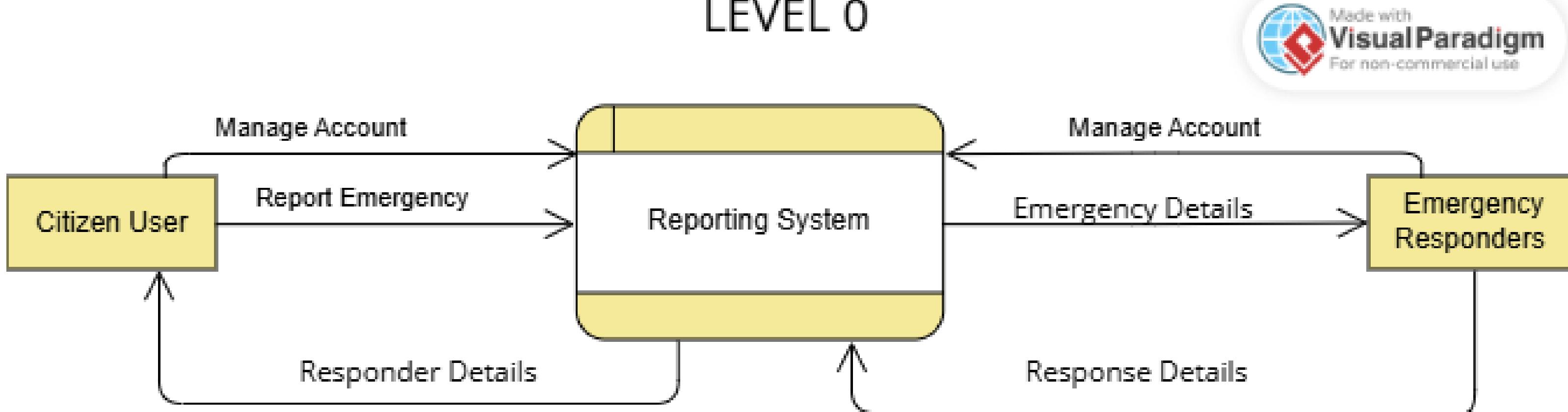
Data Flow Diagram

LEVEL 2



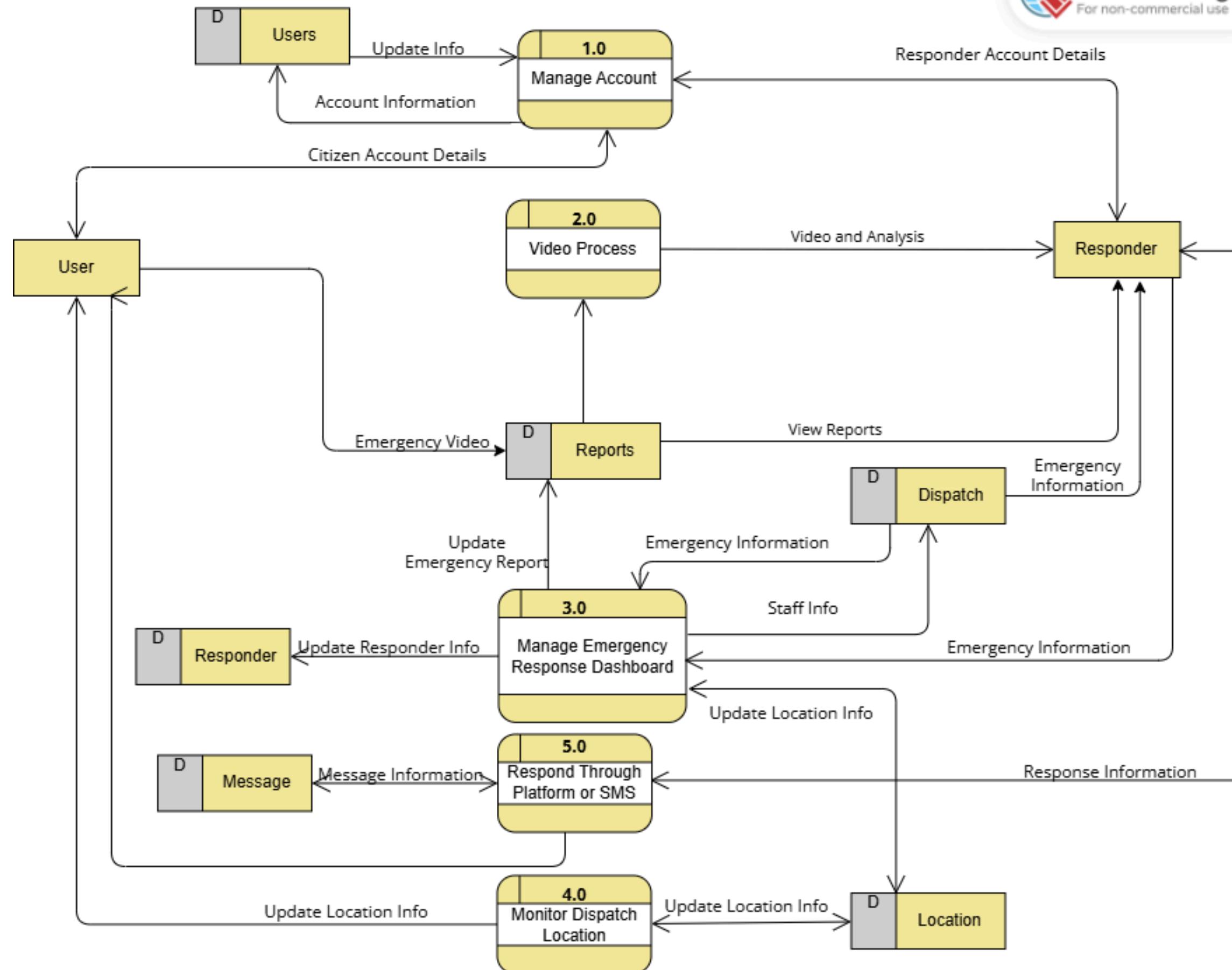
Data Flow Diagram

LEVEL 0



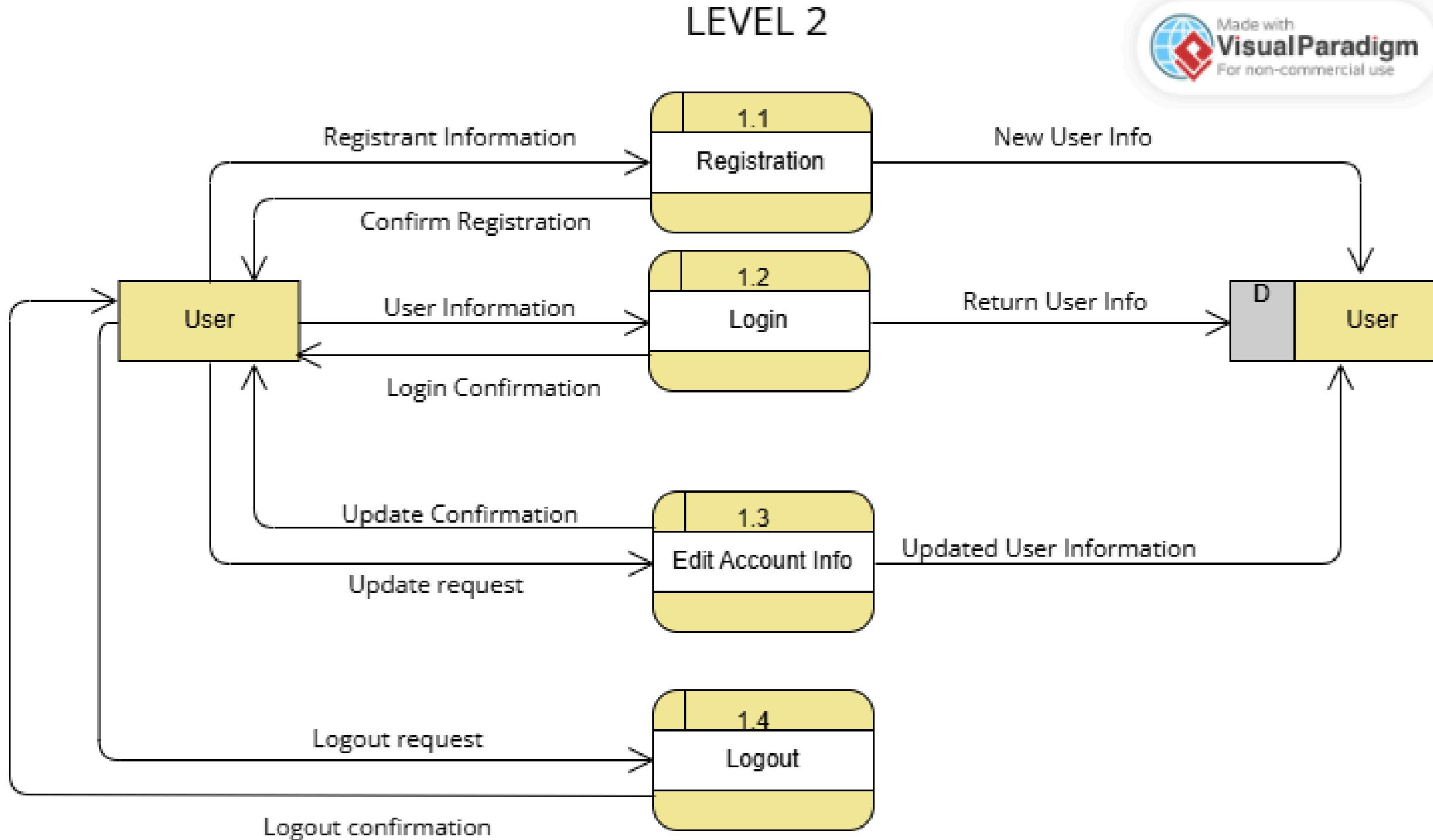
After

LEVEL 1

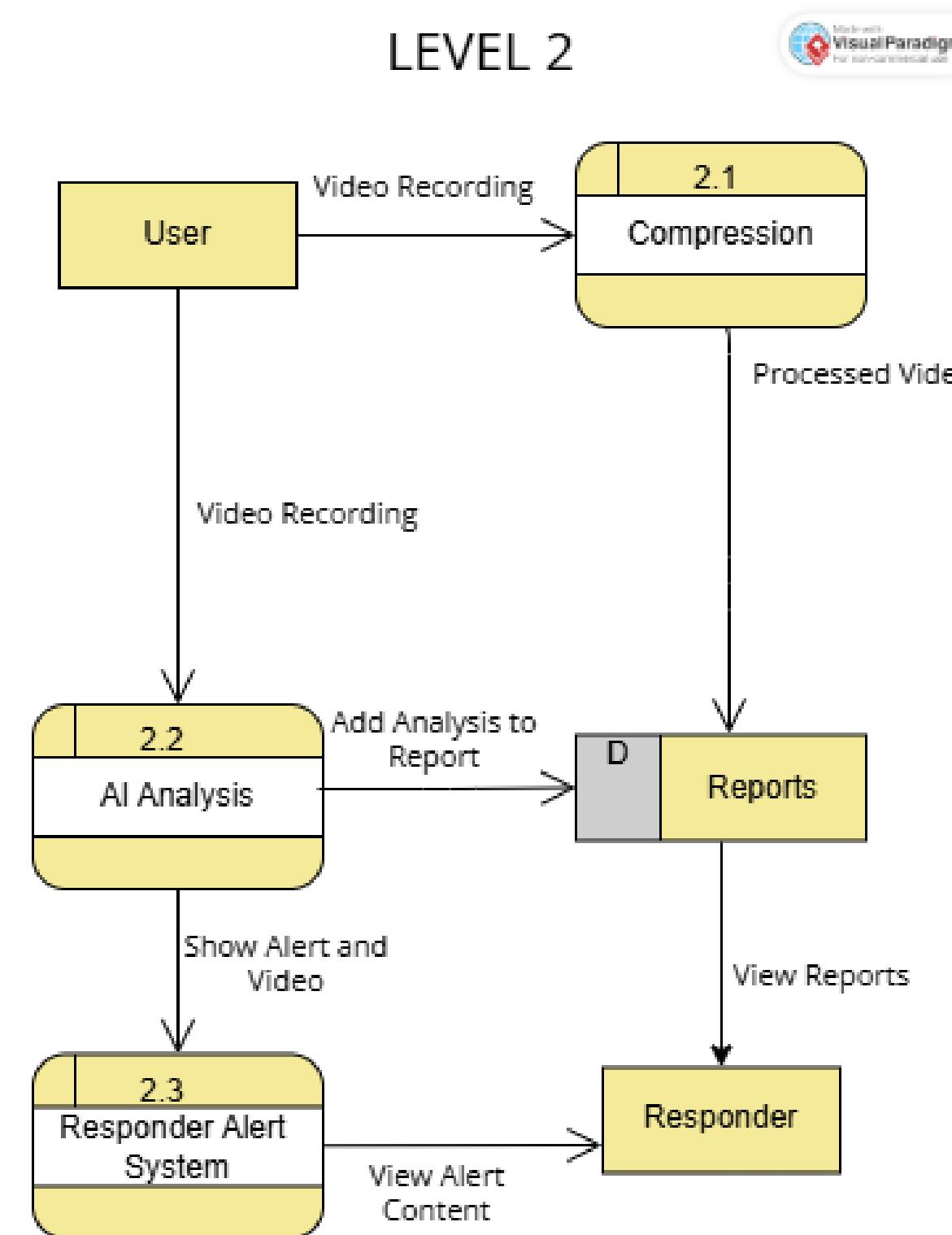


Data Flow Diagram

Data Flow Diagram



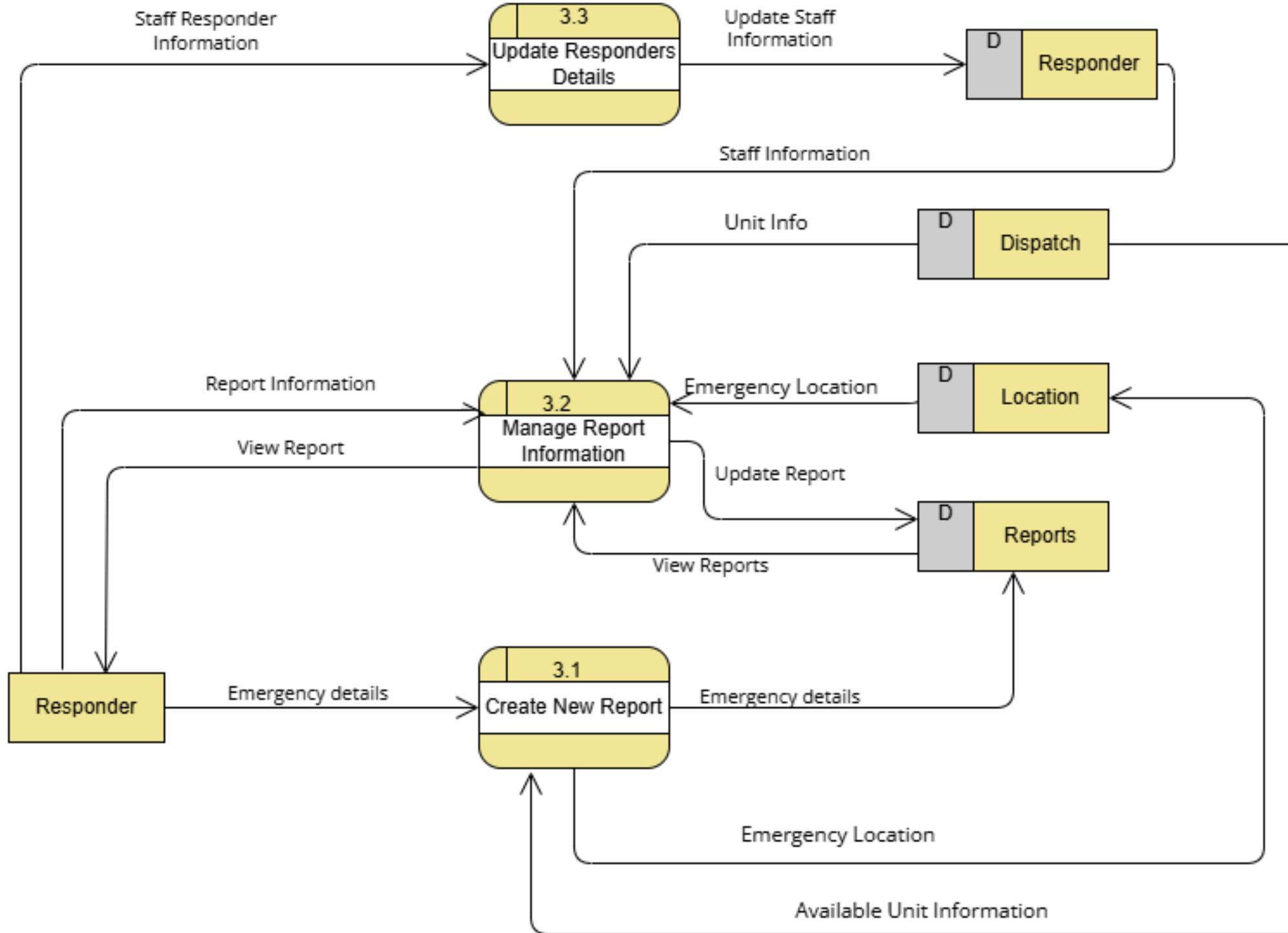
Data Flow Diagram



Data Flow Diagram

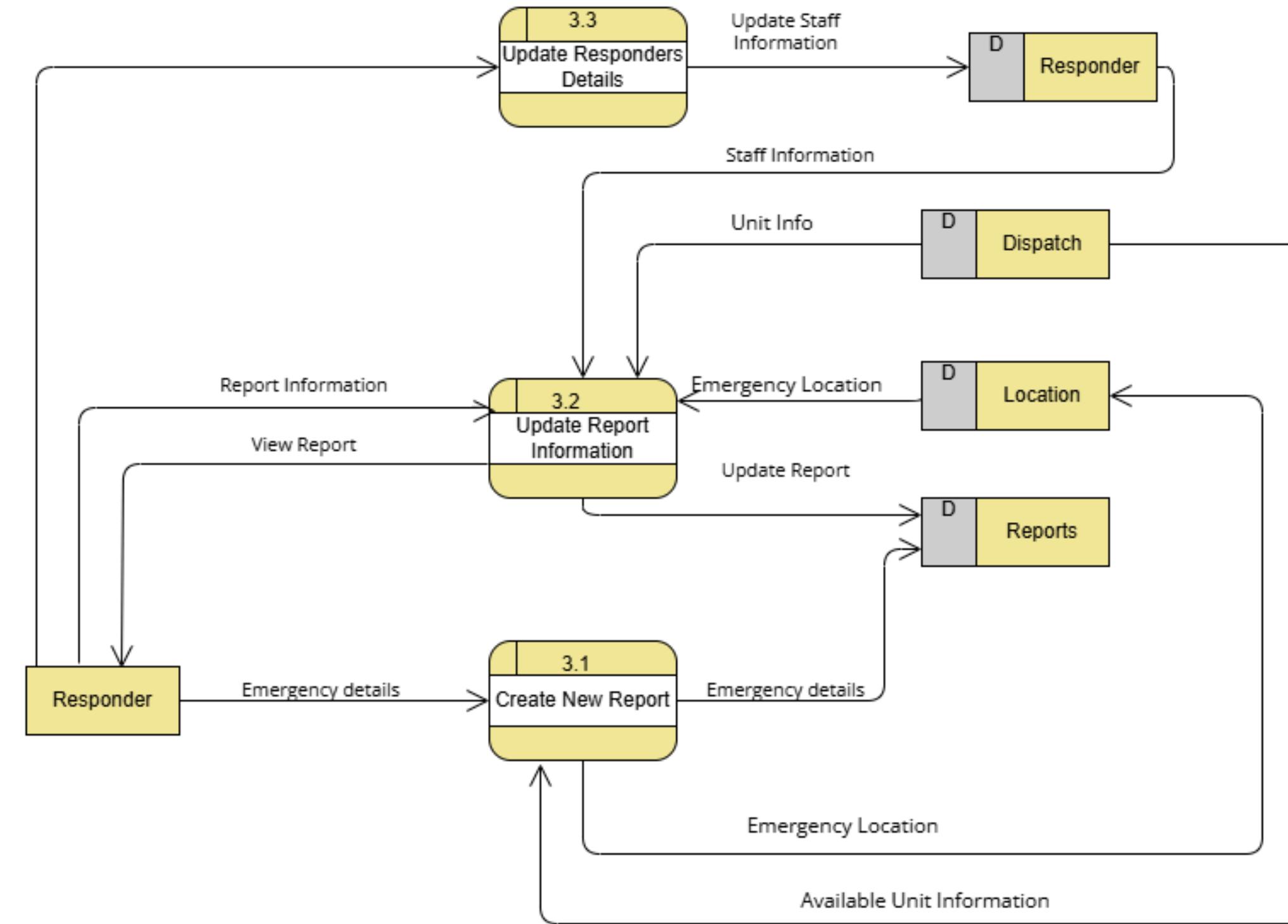
LEVEL 2

Made with
Visual Paradigm
For non-commercial use



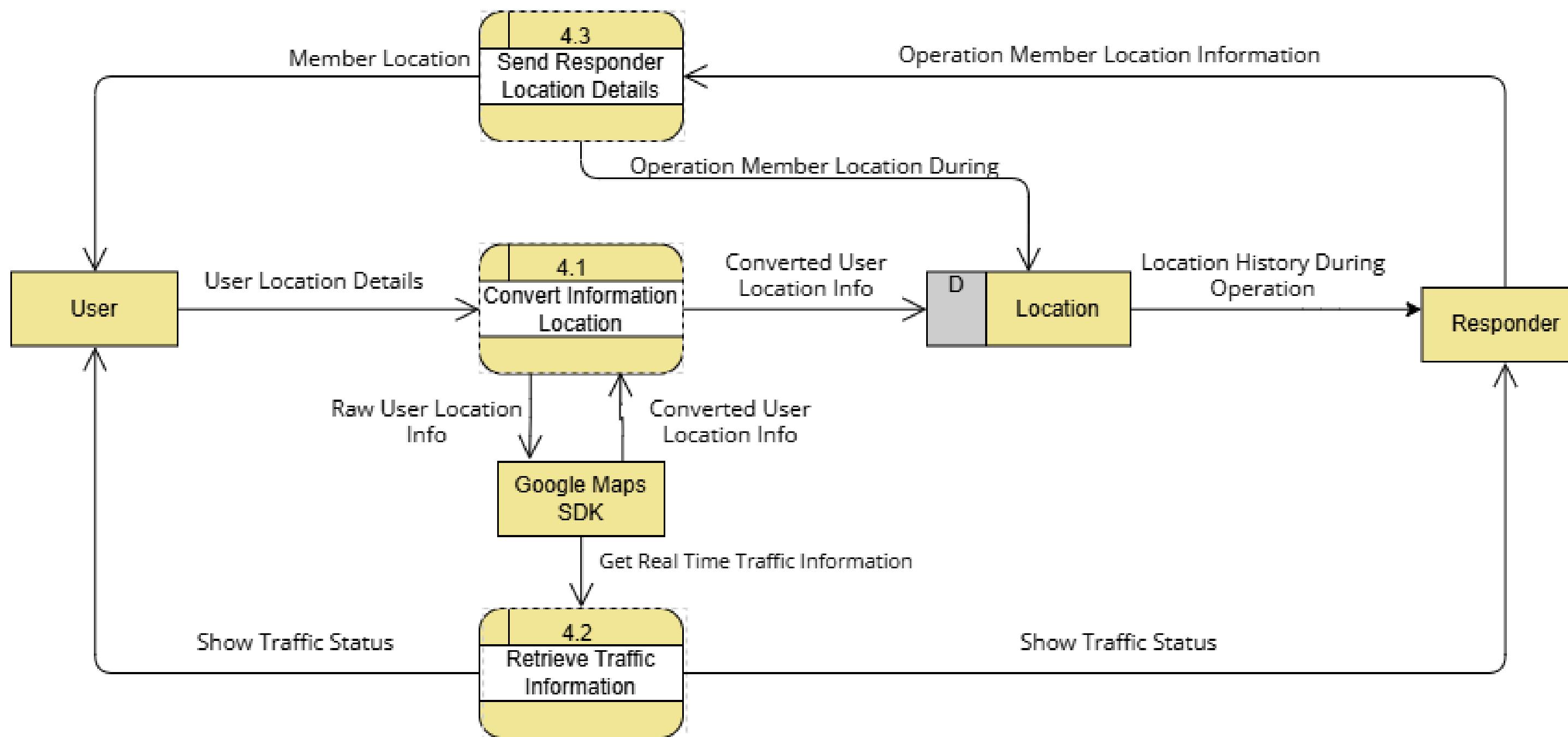
Data Flow Diagram

LEVEL 2



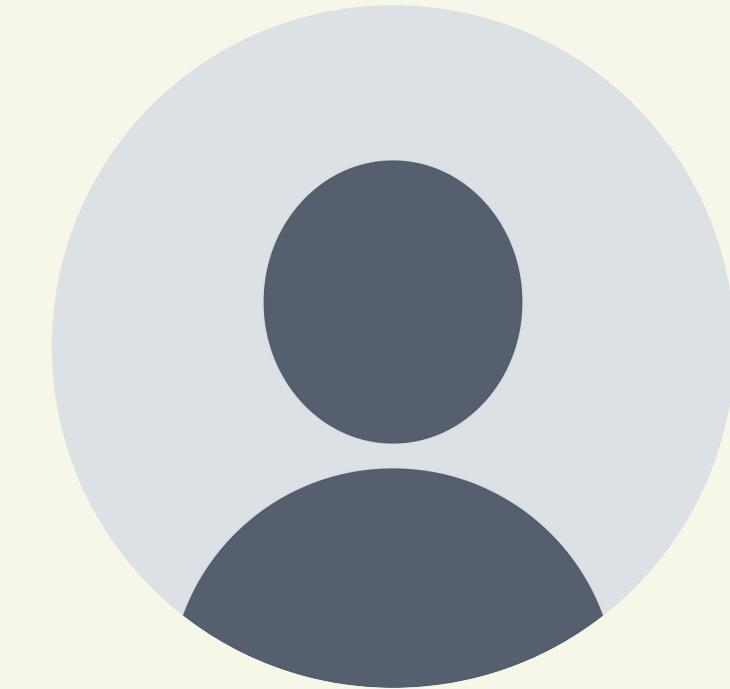
Data Flow Diagram

LEVEL 2





Design Thinking



ROLANDO JIMENEZ

Age	: 31
Occupation	Fire Officer 1, Emergency Medical Service
Location	: Evangelista, Makati City

FO1 Rolando C. Jimenez Jr. is a firefighter assigned to the BFP Evangelista Fire Sub-Station in Makati, with around two years of service experience. Aside from his frontline duties in firefighting and emergency response, he is also responsible for tracking key performance metrics to support the station's operational efficiency and compliance with BFP standards.

Goals

- Brave and caring, faces danger to help others
- Calm under pressure, makes quick decisions
- Team player, works well with others
- Track Key-Performance Metrics for their station

Personal Characteristics

- Brave and caring, the firefighter faces danger to help others. Calm under pressure, they make quick decisions in emergencies. A strong team player, they work well with others to get the job done.

Hobbies

- Community involvement or volunteering
- Physical fitness activities like running,

Sources of Information

- Interview



DANIEL T. ROLDAN

Age	: 33
Occupation	: Medical Officer
Location	: Makati City Health Office

Daniel Roldan is a Medical Officer of the City Health Office. They ensure every health concerns are treated seriously and with fairness across different agencies.

Goals

- Ensure fast and effective emergency
- Maintaining accurate data and communication
- Strengthen coordination across agencies
- Overcome operational challenges

Personal Characteristics

- He's kind, family oriented, helpful to people who are in need, generous and usually calm in times of intense situations.

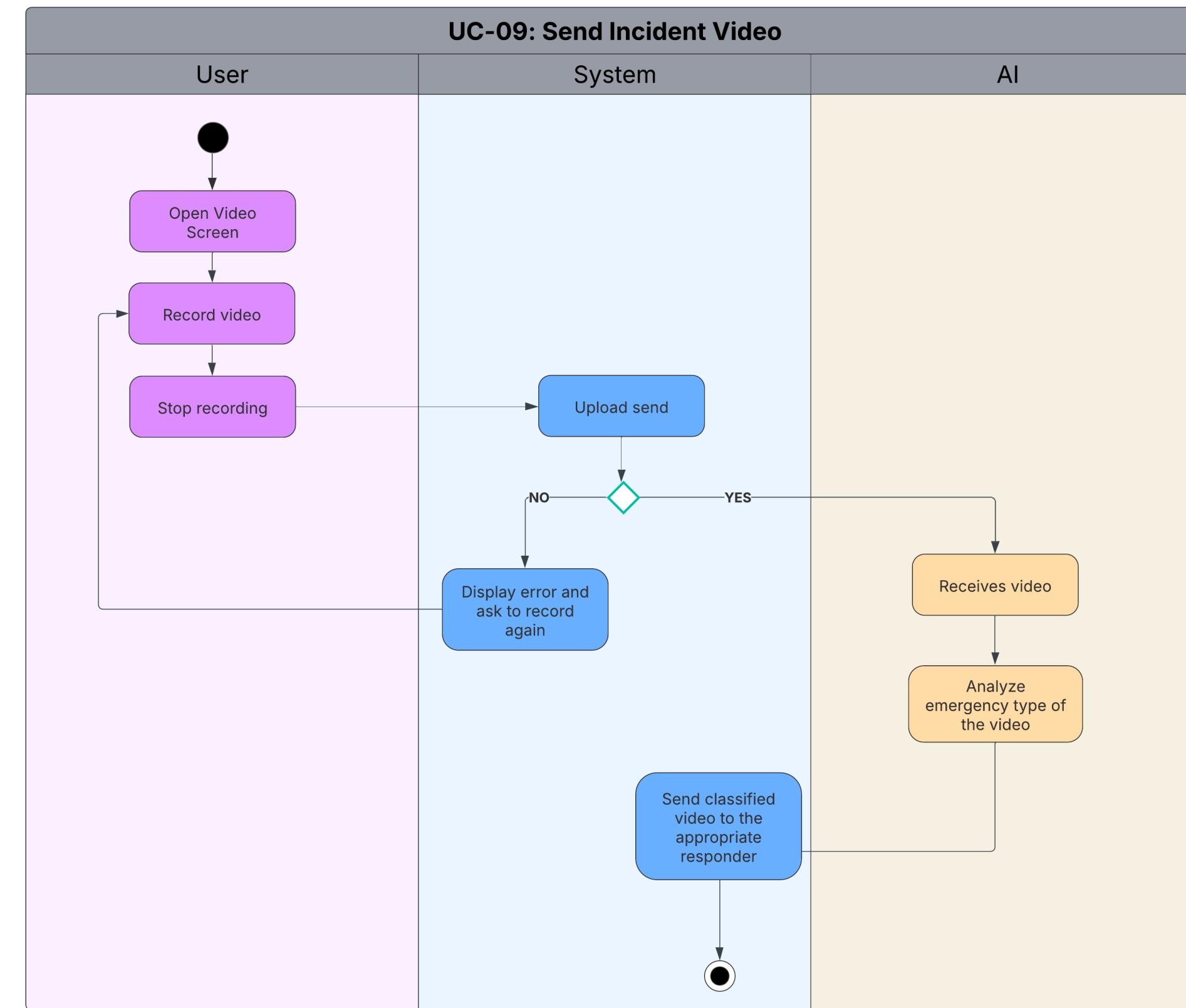
Hobbies

- Exercising (Running)

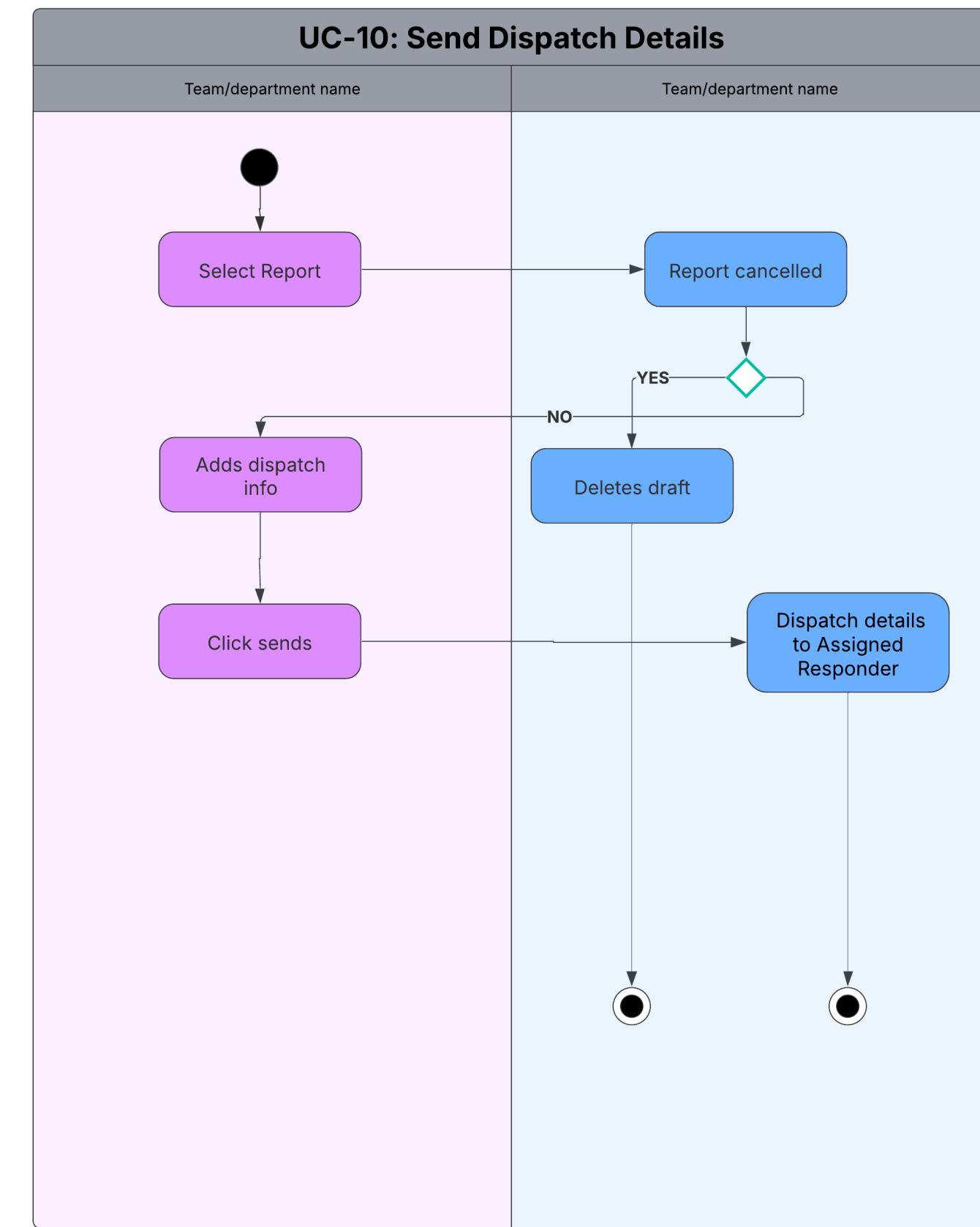
Sources of Information

- Health reports of other people
- Social Media

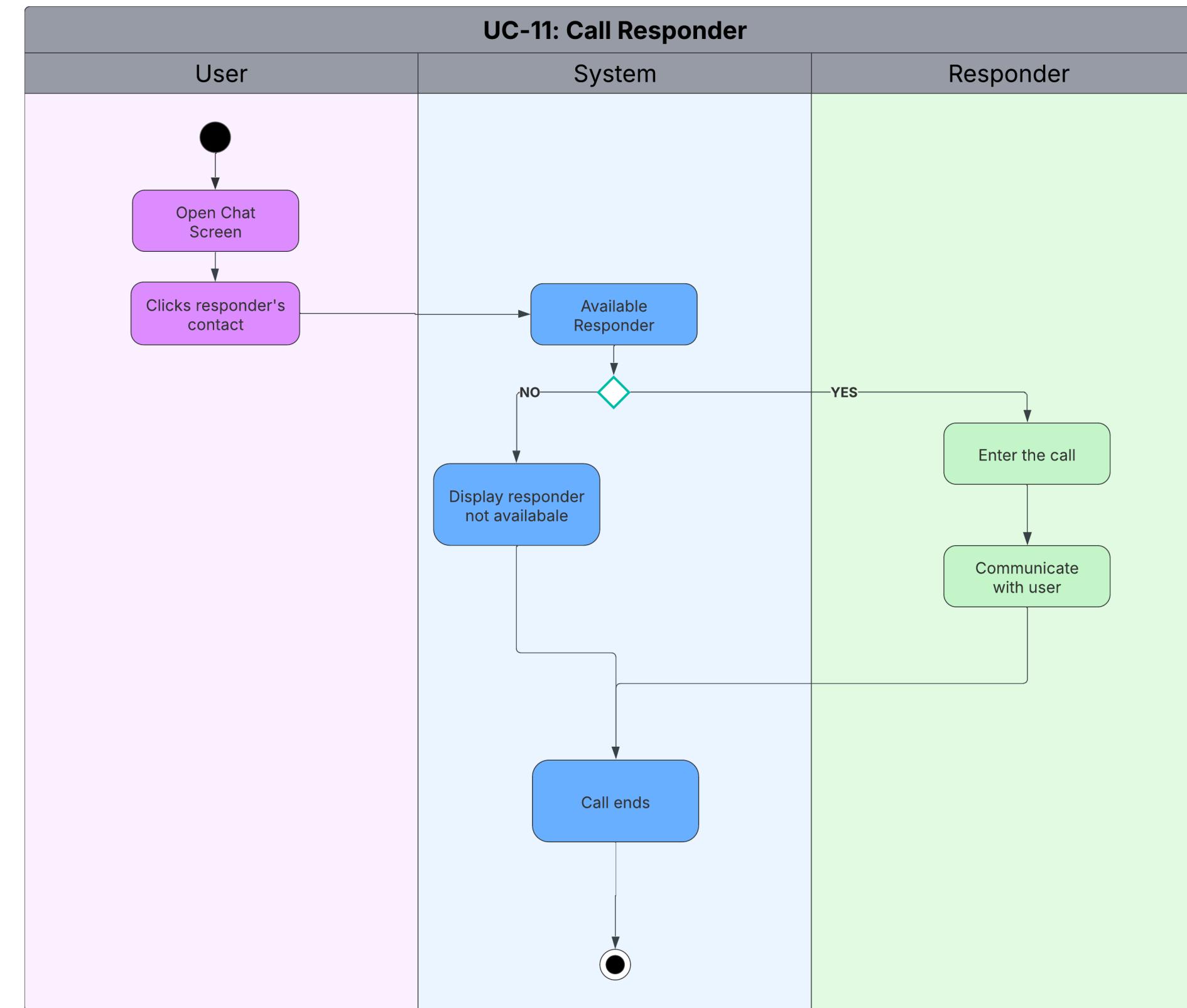
Activity Diagram



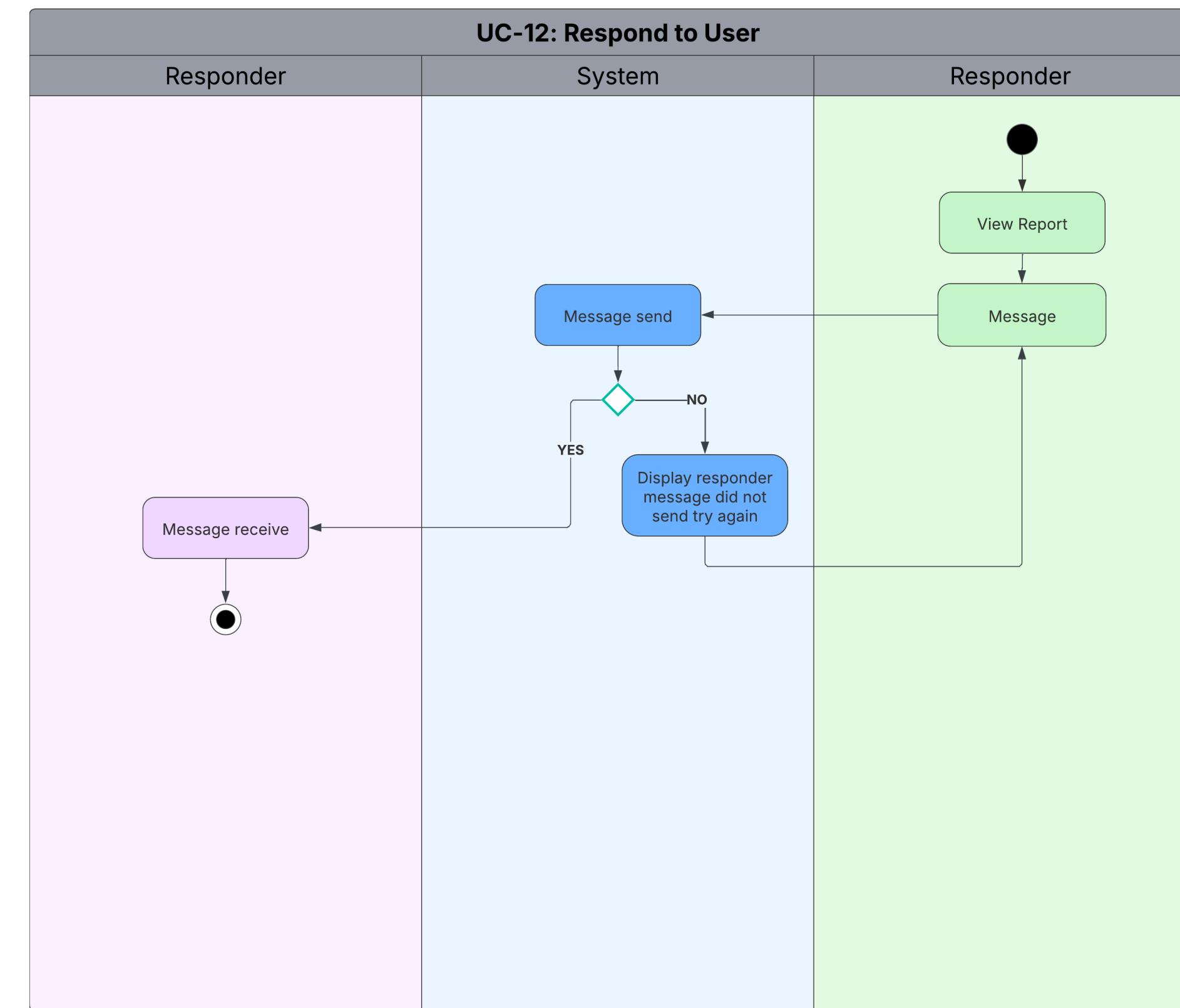
Activity Diagram



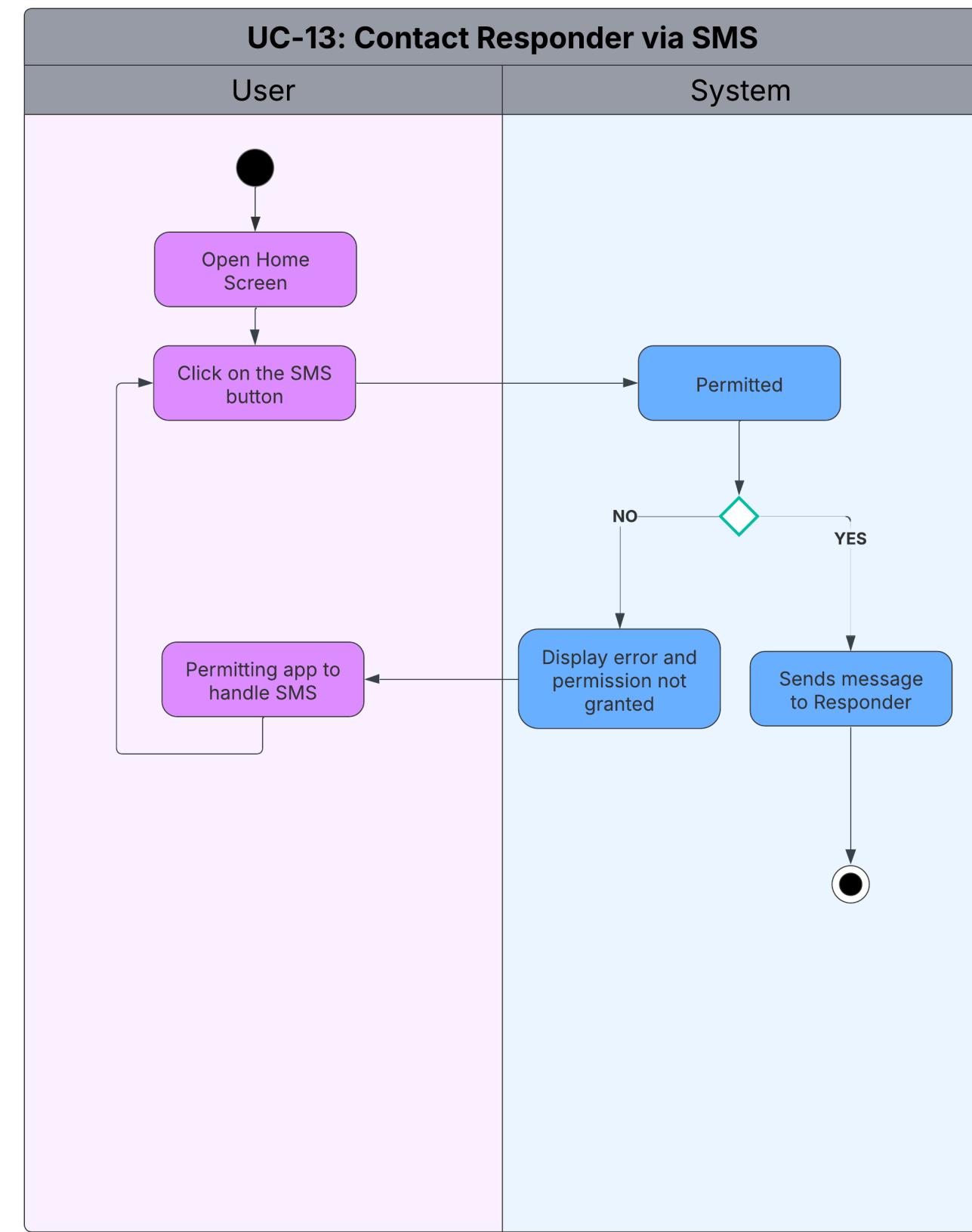
Activity Diagram



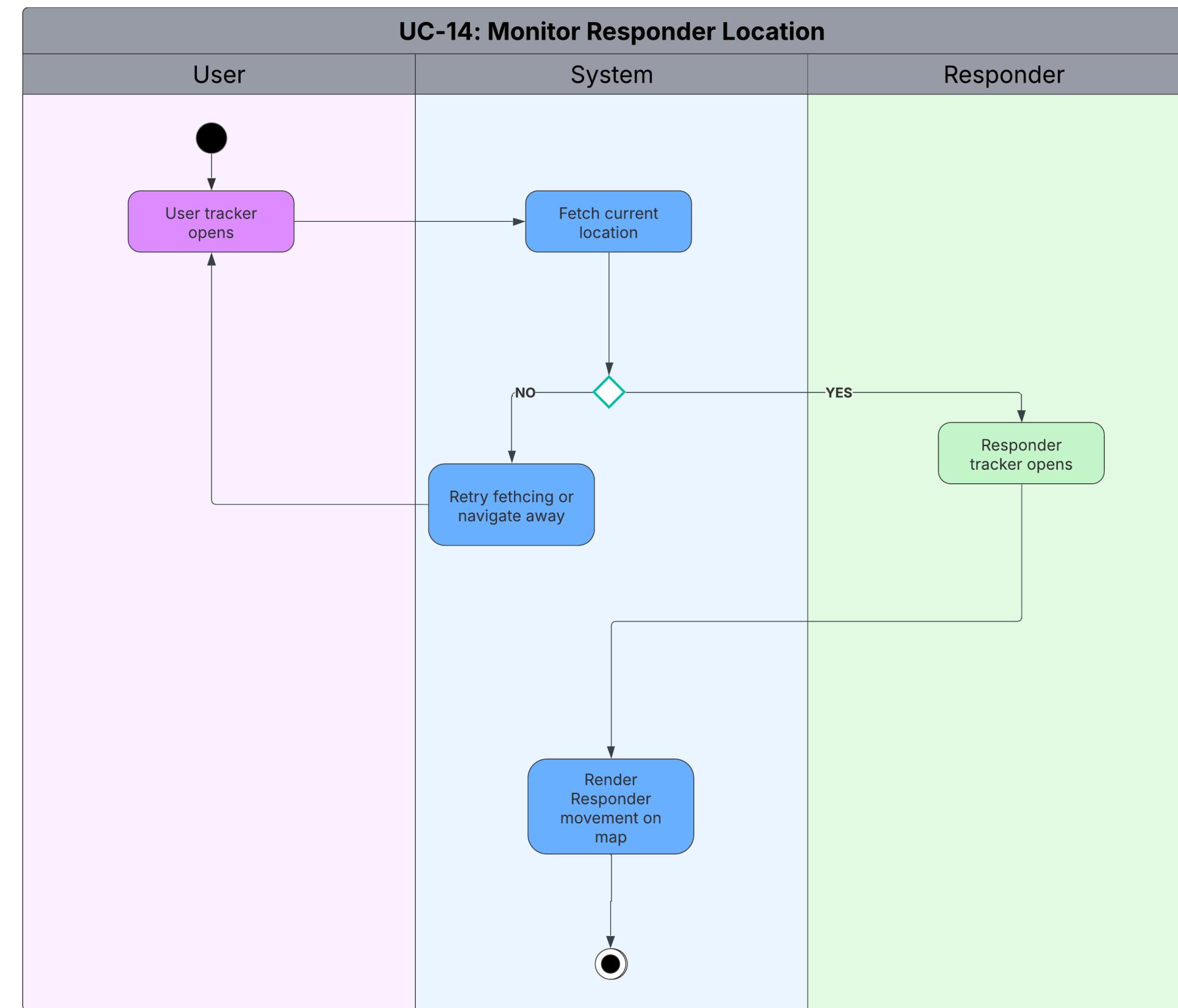
Activity Diagram



Activity Diagram



Activity Diagram



Updated Test Cases

Test Case ID	Test Steps	Input Data	Expected Results	Actual Results	Test Environment	Execution Status	Bug Severity	Bug Priority	Notes
TC-01	1. Open app 2. Tap "Register" 3. Enter valid info 4. Tap "Submit"	Valid name, email, contact, password	Account successfully created; confirmation message displayed		Android emulator / Firebase backend	Pending	Low	High	Verify email validation
TC-02	1. Open app 2. Enter credentials 3. Tap "Login"	Registered user credentials	User logged in and redirected to home page		Android emulator / Web	Pending	Medium	High	Include invalid login scenario
TC-03	1. Open Account Settings 2. Change password 3. Tap "Save"	Old + new password	Password successfully updated and user notified		Mobile app	Pending	Low	Medium	Check weak password validation

Updated Test Cases

Test Case ID	Test Description	Preconditions	Test Steps	Environment	Status	Risk Level	Priority	Notes
TC-04	1. Tap "Report Emergency" button 2. Record 5-10s video (e.g., fire) 3. Submit report	Emergency video	Video uploads; AI begins classification	Android device + AI backend	Pending	High	Critical	Core feature test
TC-05	1. Submit test videos (fire, medical, violence) 2. Observe classification	Sample video dataset	AI correctly classifies ≥95% of test samples	AI model test environment	Pending	High	Critical	Accuracy validation
TC-06	1. Responder logs in. 2. Opens "Reports" tab	Received reports data	Reports display correctly with status & timestamps	Web dashboard	Pending	Medium	High	Check timestamp sync

Updated Test Cases

TC-07	1. Select report 2. Add dispatch info 3. Click "Send"	Valid dispatch info	Dispatch details sent; citizen notified	Web dashboard	Pending	High	High	Ensure notification works
TC-08	1. Tap "Call Responder" 2. Wait for connection	Valid responder contact	Call connects via WebRTC; audio/video functional	Mobile (Wi-Fi)	Pending	Medium	High	Test call delay handling
TC-09	1. Responder opens report 2. Clicks "Respond" 3. Sends message	Sample reply message	Message received on user device	Web dashboard + mobile	Pending	Low	Medium	UI confirmation check
TC-10	1. Go offline 2. Select emergency type "Fire" 3. Save report	Emergency type "Fire"	Report stored locally and uploaded when online	Android offline mode	Pending	Medium	High	Offline storage validation

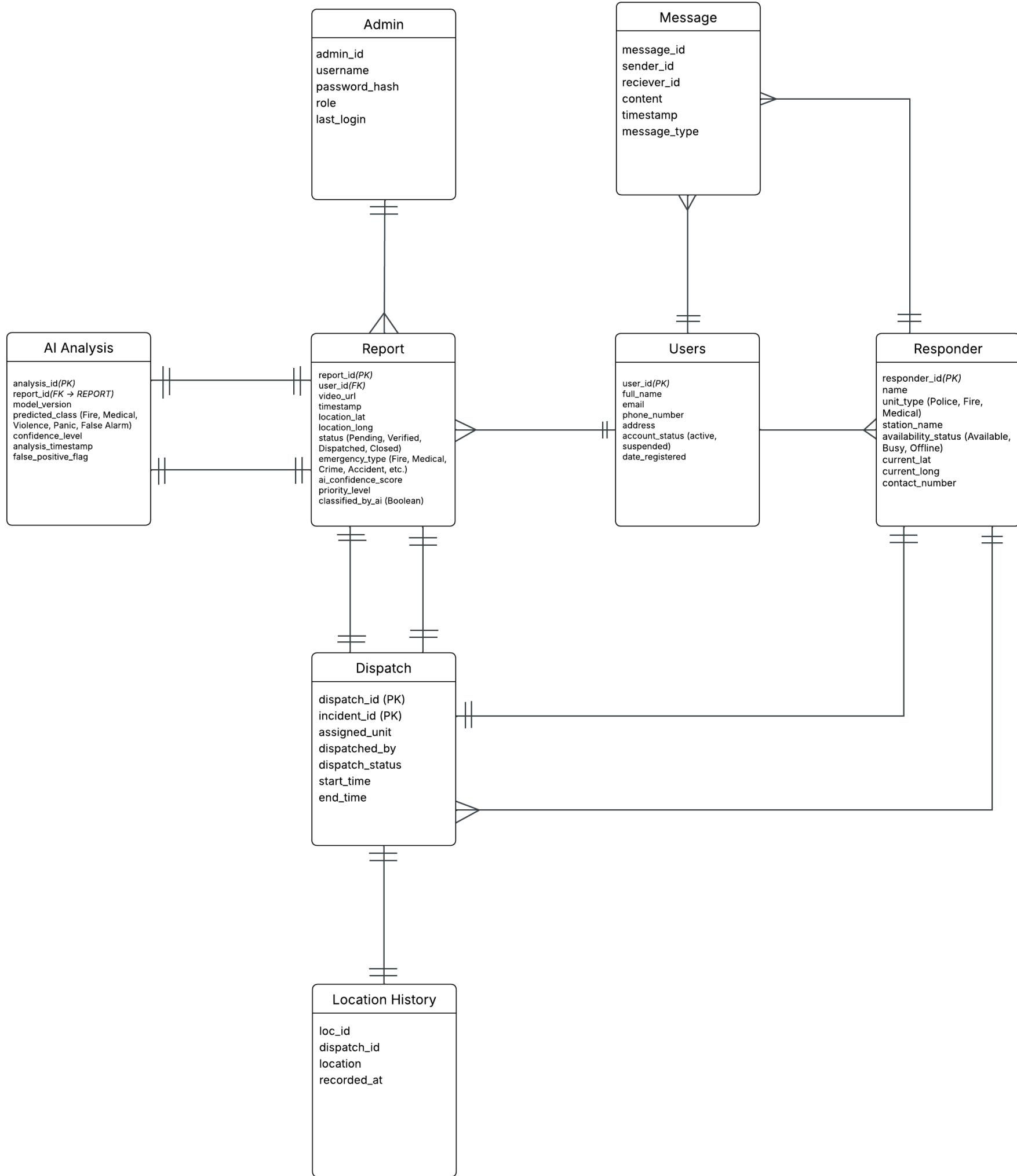
Updated Test Cases

TC-11	1. No internet 2. Tap "Send via SMS"	Responder number	SMS successfully sent	Android physical device	Pending	Low	Medium	Verify permission prompt
TC-12	1. Open "Track Dispatch" 2. View location	Active dispatch ID	Map displays responder's real-time movement	Mobile app + GPS	Pending	Medium	High	GPS accuracy test
TC-13	1. Tap "View Details"	Valid dispatch record	Details correctly shown (unit, ETA, etc.)	Web dashboard	Pending	Low	Medium	Test network error handling
TC-14	1. Tap "My Location"	Device GPS	Accurate user location displayed	Android emulator / Google Maps SDK	Pending	Medium	High	Verify location permissions
TC-15	1. Tap "View Route" 2. Choose destination	User & incident coordinates	Route rendered correctly with ETA	Google Maps SDK	Pending	Low	Medium	Include reroute scenario

Updated Test Cases

TC-16	1. Open "Traffic" tab	GPS & internet active	Live traffic indicators appear	Google Maps SDK	Pending	Low	Medium	Validate data refresh
TC-17	1. Submit unclear video	Mixed event video	AI flags uncertainty; requests manual check	AI backend	Pending	High	High	Test false positive handling
TC-18	1. Open Analytics Dashboard 2. Filter by type/date	Stored incident data	Correct charts & analytics displayed	Web dashboard	Pending	Medium	Medium	Performance validation
TC-19	1. Submit report offline 2. Reconnect internet	Offline report data	System auto-syncs pending report	Android offline/online	Pending	Medium	High	Sync timing check
TC-20	1. Tap "Logout"	Active user session	User logged out and redirected to login	Mobile/web	Pending	Low	Medium	Verify session token removal

Entity Relationship Diagram



E-ksena ERD

Relationships

User 1:M creates Report M:1
Report 1:1 links to AI Analysis 1:1
Report 1:M generates Dispatch M:1
Dispatch 1:M records Location History M:1
Report 1:M communicates via Message M:1
User 1:M sends Message M:1
Responder 1:M receives Message M:1
Responder 1:M assigned to Dispatch M:1
Responder M:1 is linked to User 1:M
Admin 1:M manages Report M:1



Demo of the Cloud Hosted System



Agile Scrum Sprint 1 Ceremonies

Sprint 1 Sprint Planning meeting output

Monday, September 22

October 2025

Su Mo Tu We Th Fr Sa

21	22	23	24	25	26	27

Sprint

28	29	30	1	2	3	4

Prep week

5	6	7	8	9	10	11

Presentation Day

12	13	14	15	16	17	18

19 20 21 22 23 24 25

26 27 28 29 30 31 1

- 30 mins + Focus

2 Weeks of sprint

Idea 1:

- 1 - 2 hrs of focused sprint working
- Monday to Friday sprint days
- Saturday & Sunday Meeting/Brainstorm

Idea 2:

- 2 - 4 hrs of focused sprint work
- Monday to Saturday sprint days
- Sunday Meeting

Peter Arquines

Jesmark David Presbitero

Paul Brian Sumilhig

Lance Benedict Onnagan

Daily Scrum Output

Day 01

LO

[RE: Sprint 1 Week 1 Daily 01 Scrum Meeting Individual Updated Report](#) - Added by [Lance Benedict Onnagan](#) 28 days ago

1.

What did I do yesterday? none

2. What will I do today? creating a fixed schedule for all of us to collaborate

3. Anything blocking my progress? internet connection due to typhoon

PA

[RE: Sprint 1 Week 1 Daily 01 Scrum Meeting Individual Updated Report](#) - Added by [Peter Jr Arquines](#) 28 days ago

1. What

- To b

2. What

- Held

3. Anyth

- Time

[RE: Sprint 1 Week 1 Daily 01 Scrum Meeting Individual Updated Report](#) - Added by [Paul Brian Sumilhig](#) 28 days ago

1. 1. What did I do yesterday? none

2. What will I do today? ask for a meeting and settle details and clarify activities for the sprint

3. Anything blocking my progress? Events and other Activities like SoCIT Fest Planning to be honest

J@

[RE: Sprint 1 Week 1 Day 01 Scrum Meeting Individual Updated Report](#) - Added by [jcpresbitero@student.apc.edu.ph](#) 8 days ago

1. 1. What did I do yesterday? none

2. What will I do today? Do the task assign to me

3. Anything blocking my progress? Personal problems



Daily Scrum Output

Day 02

PA

RE: Sprint 1 Week 1 Day 02 Scrum Meeting Individual Updated Report - Added by Peter Jr Arquines 24 days ago

1. What did I do yesterday? - Finished revising the fully dressed use case
2. What will I do today? - meet with my group for updates and what are needed to do after
3. Anything blocking my progress? - time management, lack of reminders to myself

PS

RE: Sprint 1 Week 1 Day 02 Scrum Meeting Individual Updated Report - Added by Paul Brian Sumilhig 18 days ago

1. What did I do yesterday? - Decided on the process for the AI and what type of Learning I should do
2. What will I do today? - Start on the DFD
3. Anything blocking my progress? - The complications by using the wrong diagram as a reference for the new DFD



Daily Scrum Output

Day 03

J@

RE: Sprint 1 Week 1 Day 03 Scrum Meeting Individual Updated Report - Added by jcpresbitero@student.apc.edu.ph 8 days ago

What did I do yesterday? -None

2. What will I do today? -Updating my groupmates what's my progress

PA

RE: Sprint 1 Week 1 Day 03 Scrum Meeting Individual Updated Report - Added by Peter Jr Arquines 18 days ago

1. What did I do yesterday? - Checked for any backlogs needed to be done

2. What will I do today? - Held an update meeting with the group and talked about what we needed to be done

3. Anything blocking my progress? - Too many backlogs including different Subjects, Procrastination

PS

RE: Sprint 1 Week 1 Day 03 Scrum Meeting Individual Updated Report - Added by Paul Brian Sumilhig 18 days ago

1. What did I do yesterday? - Decided to Restart on the DFD

2. What will I do today? - update meeting with the group and talked about what I wanted to do and what was blocking me with my progress

3. Anything blocking my progress? - Too many backlogs including different Subjects and Agendas + events



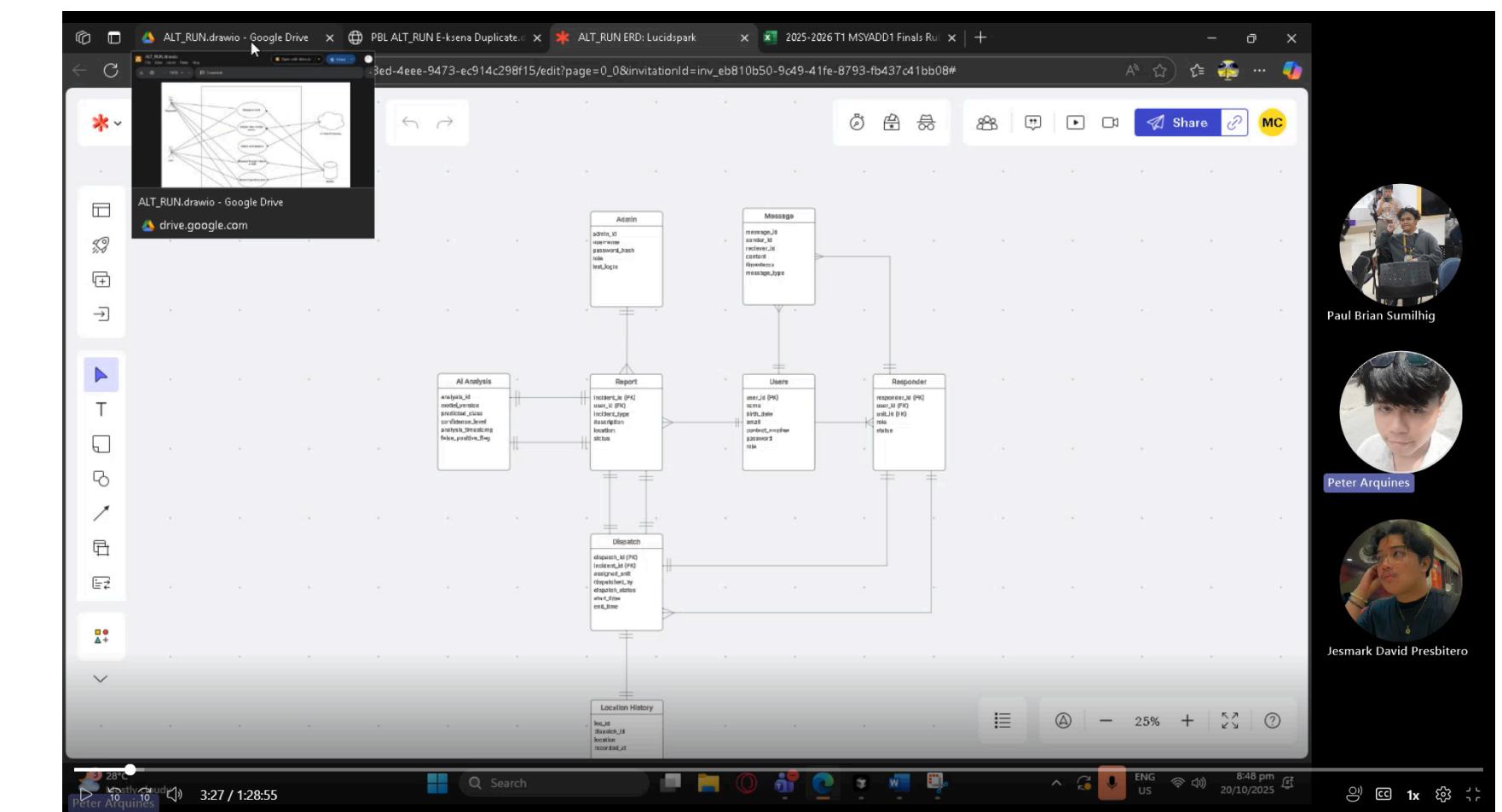
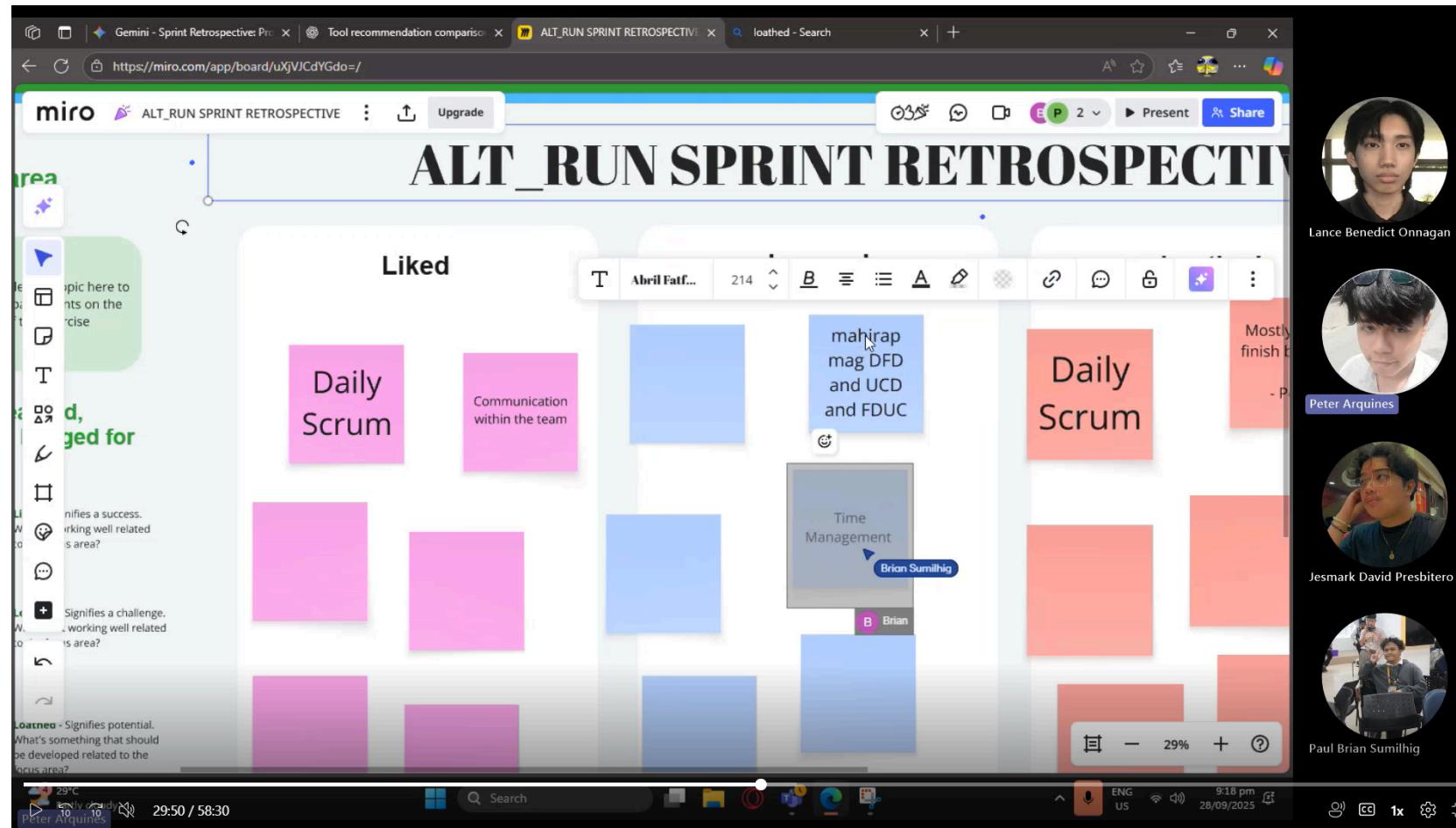
Sprint 1: Backlog refinement meeting output

Work packages							Work packages						
Type	Status	Priority	Subject	Assignee	Updated On	Position	Type	Status	Priority	Subject	Assignee	Updated On	Position
Sub Task	New	Normal	Training set materials for Ai	PS Paul Brian Sumilhig	09/28/2025 1:27 PM	1	Sub Task	On hold	Normal	Training set materials for Ai	PS Paul Brian Sumilhig	10/21/2025 3:27 AM	1
Sub Task	In progress	Normal	Front End - Login Form (UI/UX)	J@ jcpresbitero@student.apc.edu.ph	09/30/2025 1:12 PM	2	Sub Task	Closed	Normal	Front End - Login Form (UI/UX)	J@ jcpresbitero@student.apc.edu.ph	10/21/2025 3:26 AM	2
Sub Task	In progress	Normal	Back End - Login API	PA Peter Jr Arquines	09/30/2025 1:12 PM	3	Sub Task	Closed	Normal	Back End - Login API	PA Peter Jr Arquines	10/21/2025 3:26 AM	3
Sub Task	In progress	Normal	Back End - Registration API	PS Paul Brian Sumilhig	09/30/2025 1:12 PM	4	Sub Task	Closed	Normal	Back End - Registration API	PS Paul Brian Sumilhig	10/21/2025 3:26 AM	4
Sub Task	New	Normal	Back End - Database Setup	PA Peter Jr Arquines	09/09/2025 6:12 AM	5	Sub Task	On hold	Normal	Back End - Database Setup	PA Peter Jr Arquines	10/21/2025 3:27 AM	5
Sub Task	New	Normal	Form Validation	PS Paul Brian Sumilhig	09/28/2025 1:33 PM	6	Sub Task	New	Normal	Form Validation	PS Paul Brian Sumilhig	09/28/2025 1:33 PM	6
Sub Task	New	Normal	UI Design - Login Page	J@ jcpresbitero@student.apc.edu.ph	09/09/2025 5:13 AM	7	Sub Task	Closed	Normal	UI Design - Login Page	J@ jcpresbitero@student.apc.edu.ph	10/21/2025 3:26 AM	7
Sub Task	New	Normal	UI Design - Registration Form	LO Lance Benedict Onnagan	09/09/2025 5:12 AM	8	Sub Task	Closed	Normal	UI Design - Registration Form	LO Lance Benedict Onnagan	10/21/2025 3:26 AM	8
Sub Task	New	Normal	AI Integration	PS Paul Brian Sumilhig	09/09/2025 5:12 AM	9	Sub Task	On hold	Normal	AI Integration	PS Paul Brian Sumilhig	10/21/2025 3:27 AM	9
Sub Task	New	Normal	Back End - Video Upload & Storage	PA Peter Jr Arquines	09/28/2025 1:31 PM	10	Sub Task	Closed	Normal	Back End - Video Upload & Storage	PA Peter Jr Arquines	10/21/2025 3:26 AM	10
Sub Task	New	Normal	Video Compression & Optimization	PA Peter Jr Arquines	09/09/2025 5:12 AM	11	Sub Task	Closed	Normal	Video Compression & Optimization	PA Peter Jr Arquines	10/21/2025 3:27 AM	11
Sub Task	In progress	Normal	Front End - Video Capture UI	J@ jcpresbitero@student.apc.edu.ph	10/07/2025 12:43 PM	12	Sub Task	Closed	Normal	Front End - Video Capture UI	J@ jcpresbitero@student.apc.edu.ph	10/21/2025 3:26 AM	12
Sub Task	New	Normal	Testing and Debugging	PS Paul Brian Sumilhia	09/22/2025 2:40 PM	13	Sub Task	New	Normal	Testing and Debugging	PS Paul Brian Sumilhia	09/22/2025 2:40 PM	13

Before

After

Sprint 1: Sprint Review meeting output



Sprint 1: Sprint Retrospective meeting output

ALT_RUN SPRINT RETROSPECTIVE BOARD

Focus area
Add your problem or topic here to help ground participants on the focus of the exercise.

Liked, Learned, Loathed, Longed for

Liked

- Daily Scrum
- Communication within the team
- Thorough consultation with adviser
- brian team roles

Learned

- to review redundancies
- Proper DFD, UCD, FCUD format
- Help each other out
- Time Management especially during other Masters lined up
- to review other work if its cohesive
- Project Direction

Loathed

- Daily Scrum
- mostly late to finish backlogs
- heavy workload
- not using the boards consistently

Longed For

- Proper time management and setting up of deadlines for backlogs
- Would like to switch to something more efficient like every 3 days instead of daily
- Good consultation schedule
- Materials for AI Video Processing Training Set
- consistent daily scrum
- to start backlogs

Clustering

THEMES - Use these sticky notes to identify patterns and group together similar themes.

The video conference interface displays four participants in separate video feeds:

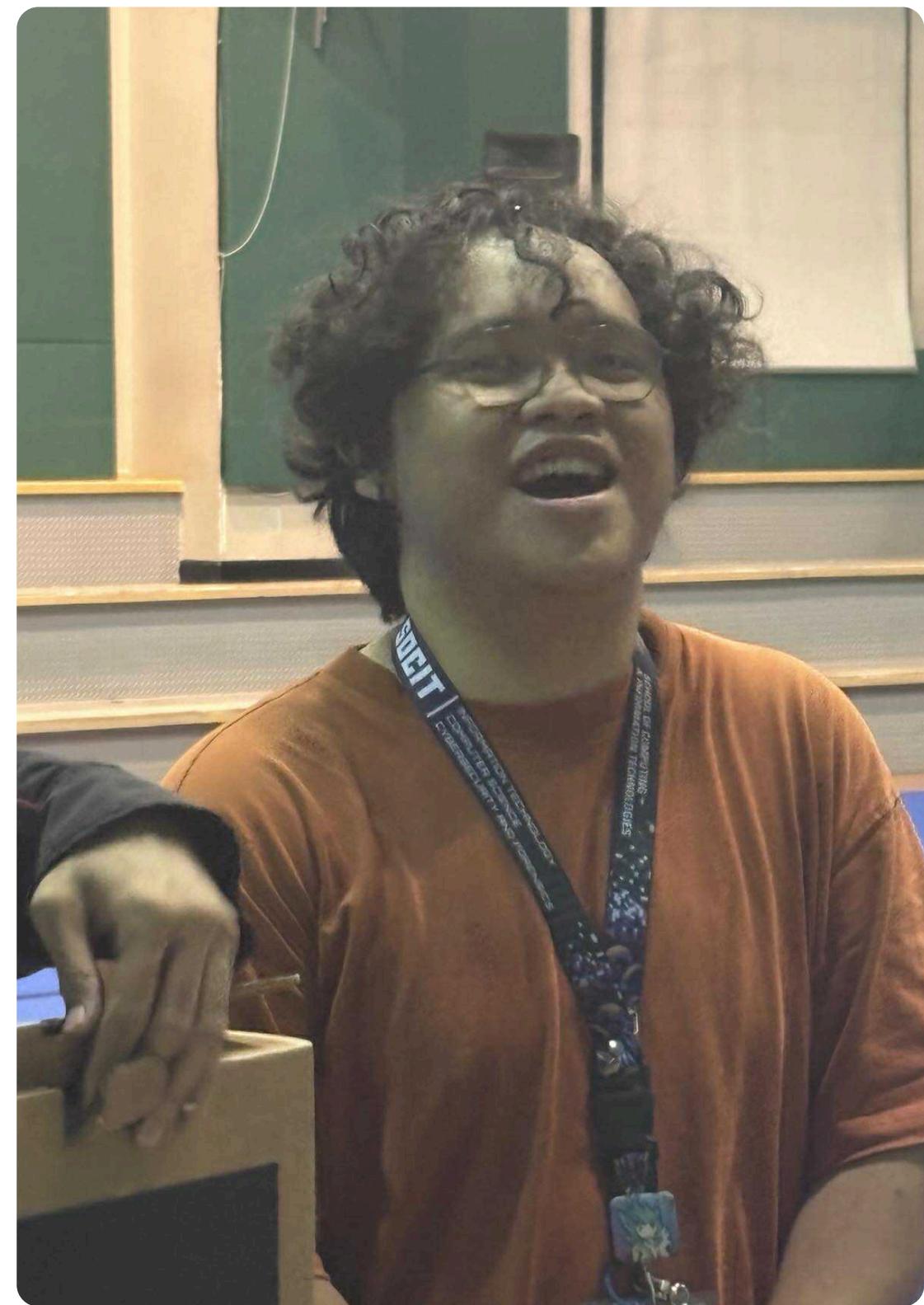
- Paul Brian Sumilhig**: Shows a man with glasses and a beard, wearing a dark shirt, sitting in front of a wall with framed photos.
- Peter Arquines**: Shows a man with glasses and short hair, wearing a dark shirt, gesturing a thumbs-up.
- Jesmark David Presbitero**: Shows a man with short hair, wearing a dark shirt, standing outdoors with trees and clouds in the background.
- Lance Benedict Onnagan**: Shows a man with long dark hair, wearing a white t-shirt, with his hand near his head.



Individual Contributions

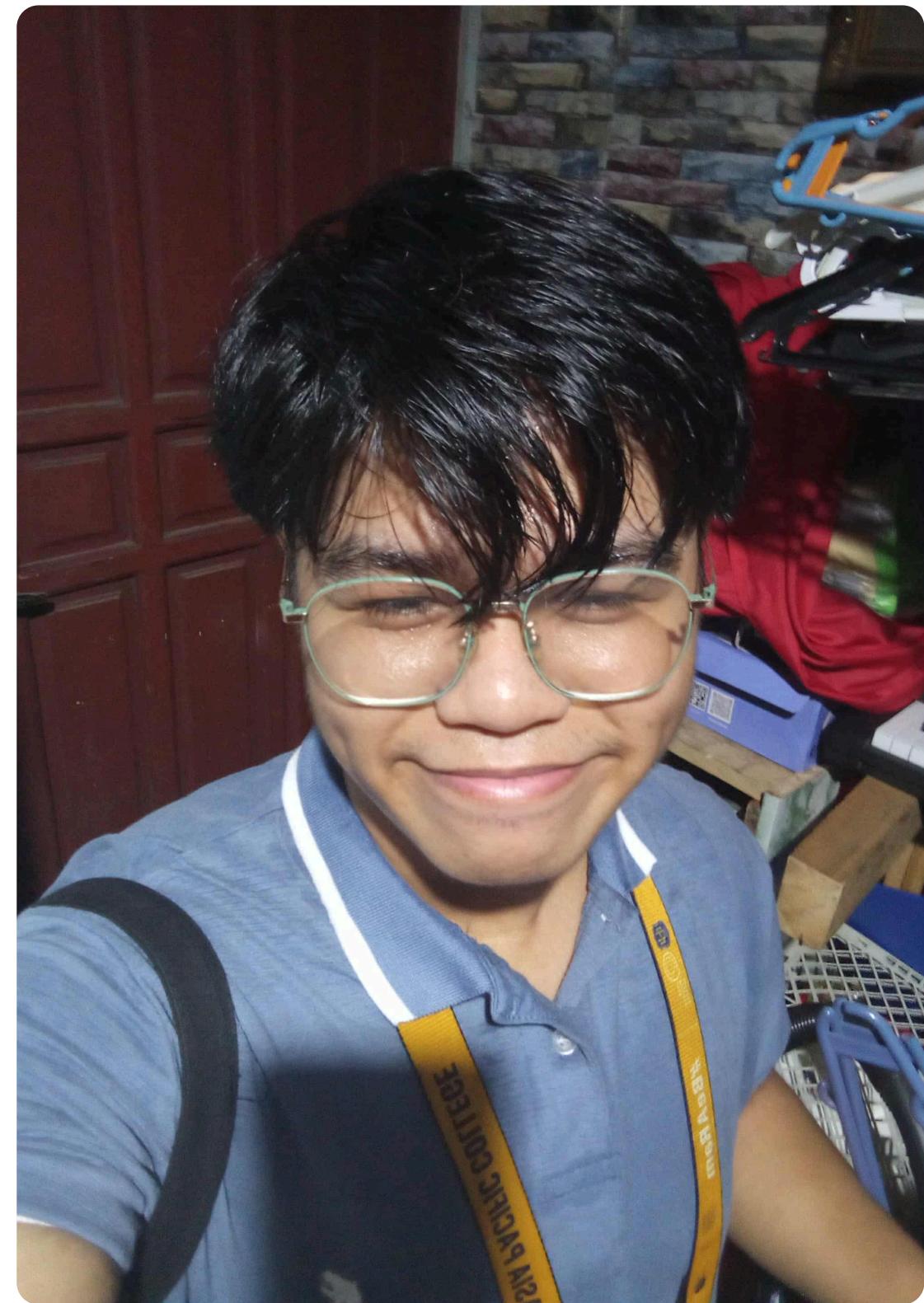
Paul Sumilhig

- Dataflow Diagram
- Activity Diagram
- Project Management
- Project Documentation Lead



Peter Arquines

- Scrum Master
- Entity Relationship Diagram
- Fully Dressed Use Case
- Back-End Development
- Facilitating Meetings
- Sprint Initiation
- Updated Test Cases
- Handled Interview (Doctor)



Lance Onnagan

- Activity Diagram
- Fully Dressed Use Case
- Minor adjustment in ERD
- Front end development in Mobile
- Mock Back end
- Pm Chapter 2
- Handled Interview



Jesmark Presbitero

- Emergency Response Dashboard Website
- Front End Development

