

**FLAREPATH – ADVANCED VEHICLE FIRE SAFETY  
AND MONITORING WITH RAPID EMERGENCY  
DISPATCH SOLUTIONS**

**R24-058**

**Status Document-1**



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Information Technology**

**Department of Information Technology**

**Sri Lanka Institute of Information Technology**

**Sri Lanka**

**March 2023**

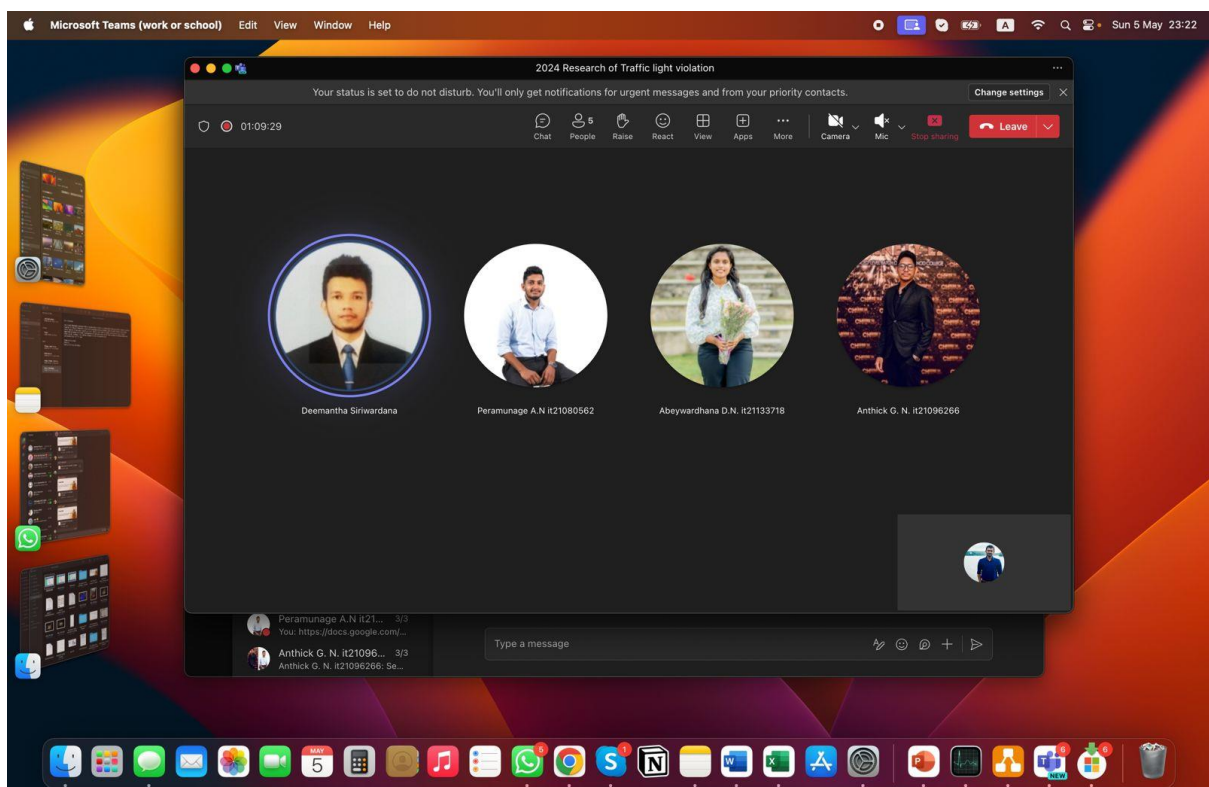
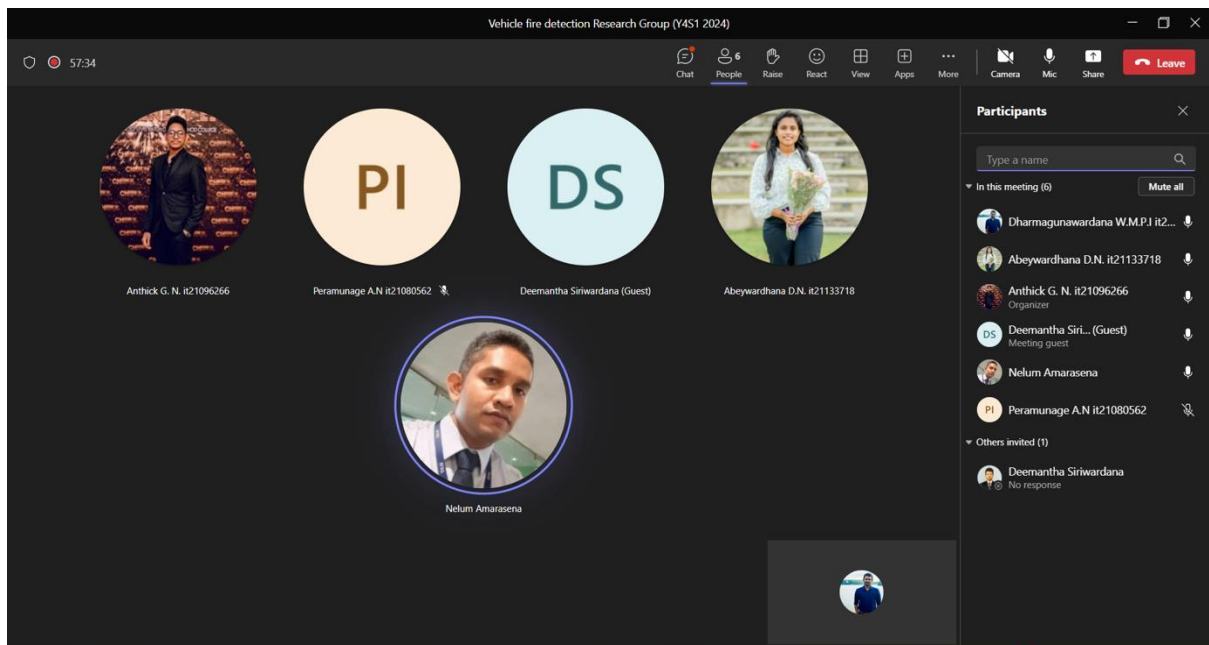
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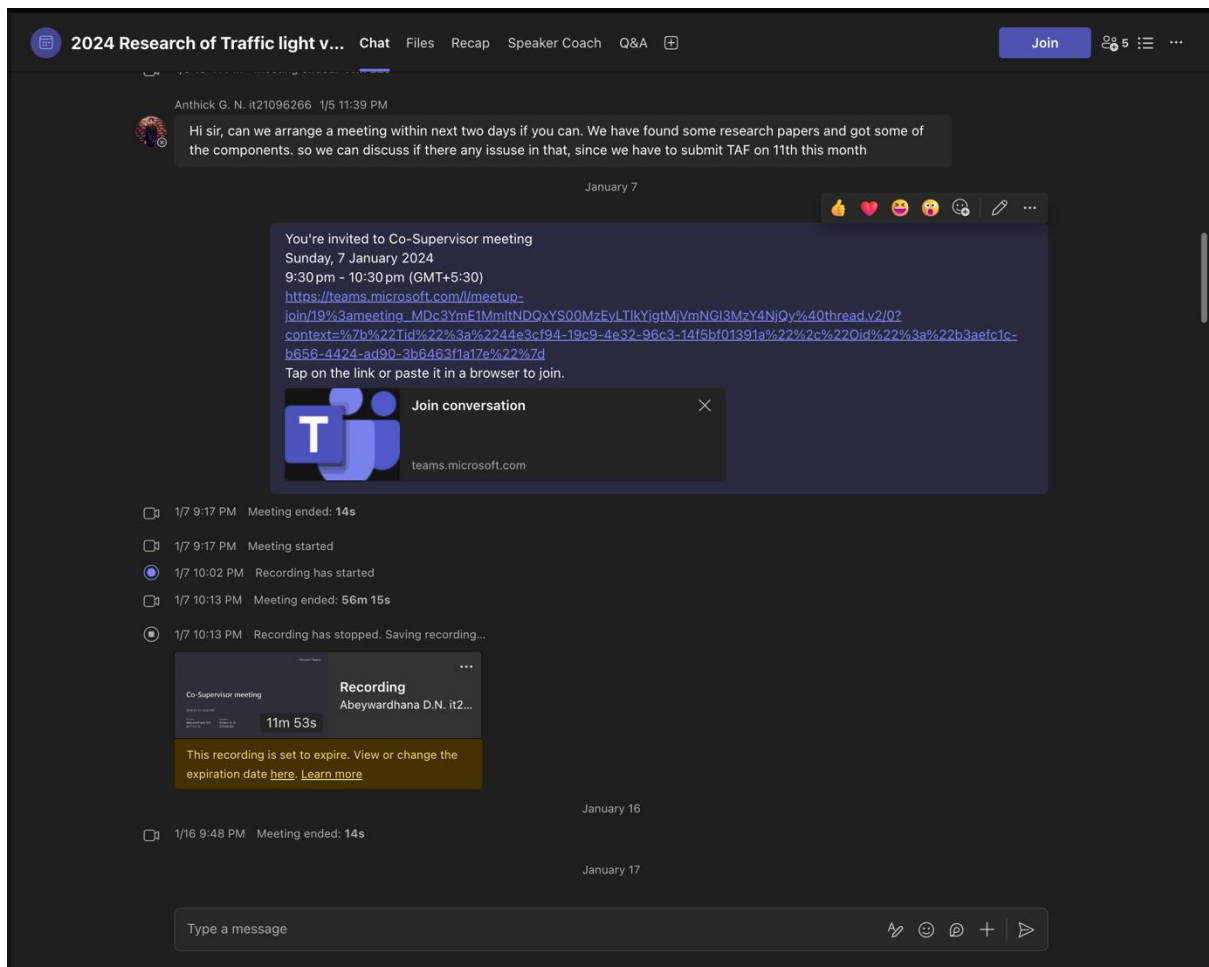
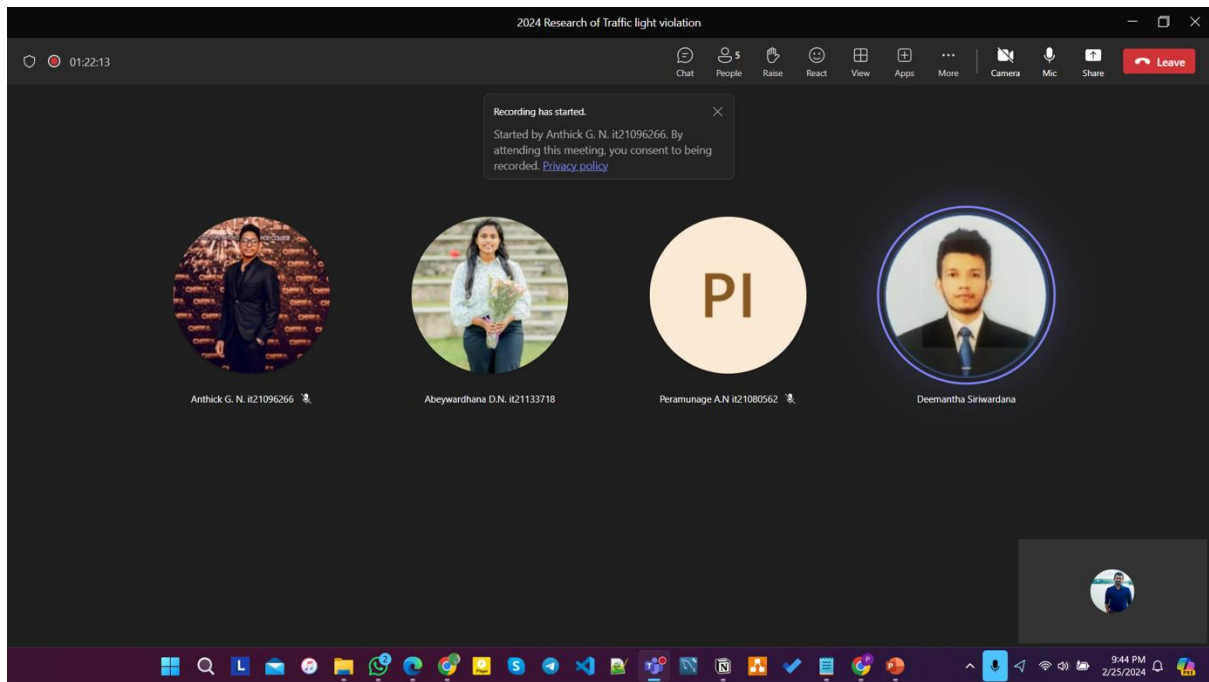
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## Meetings & Calls

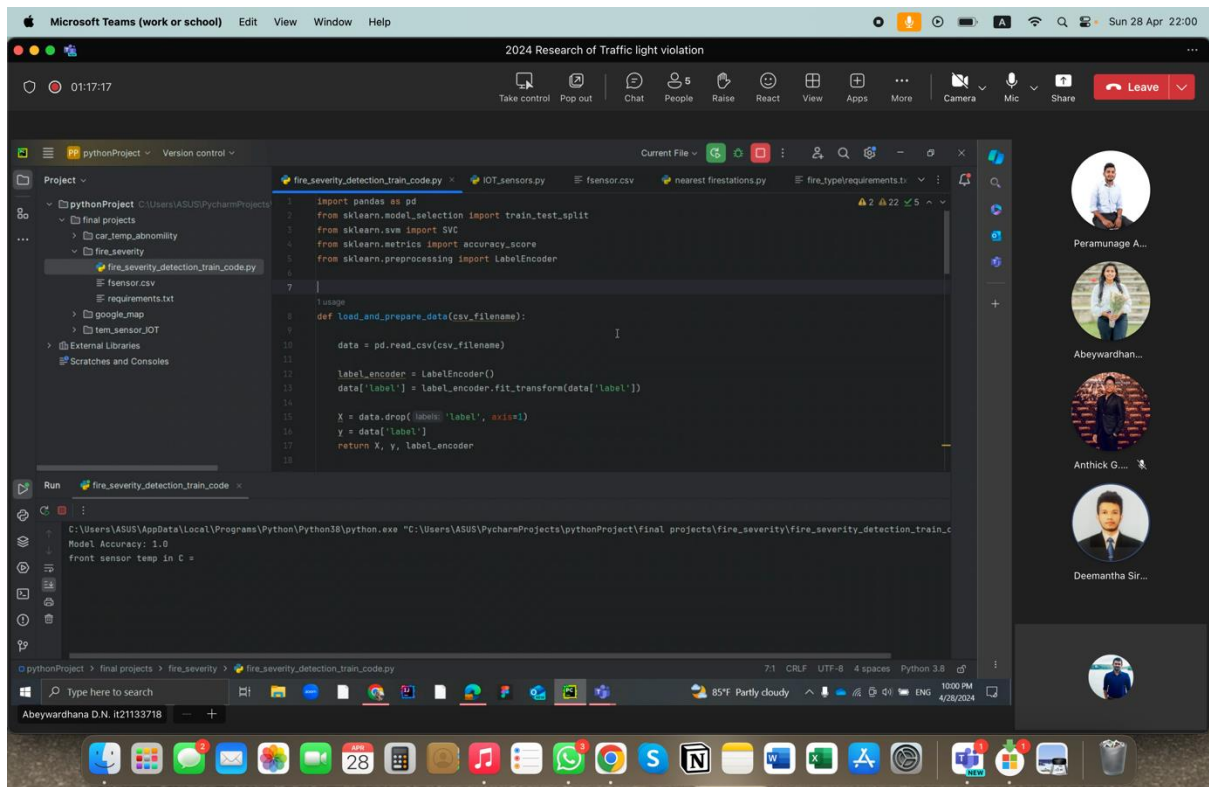
### Meetings with supervisor and co-supervisor

Meeting with both supervisor and co-supervisor about the project progress and improvements that we need to do to our project.

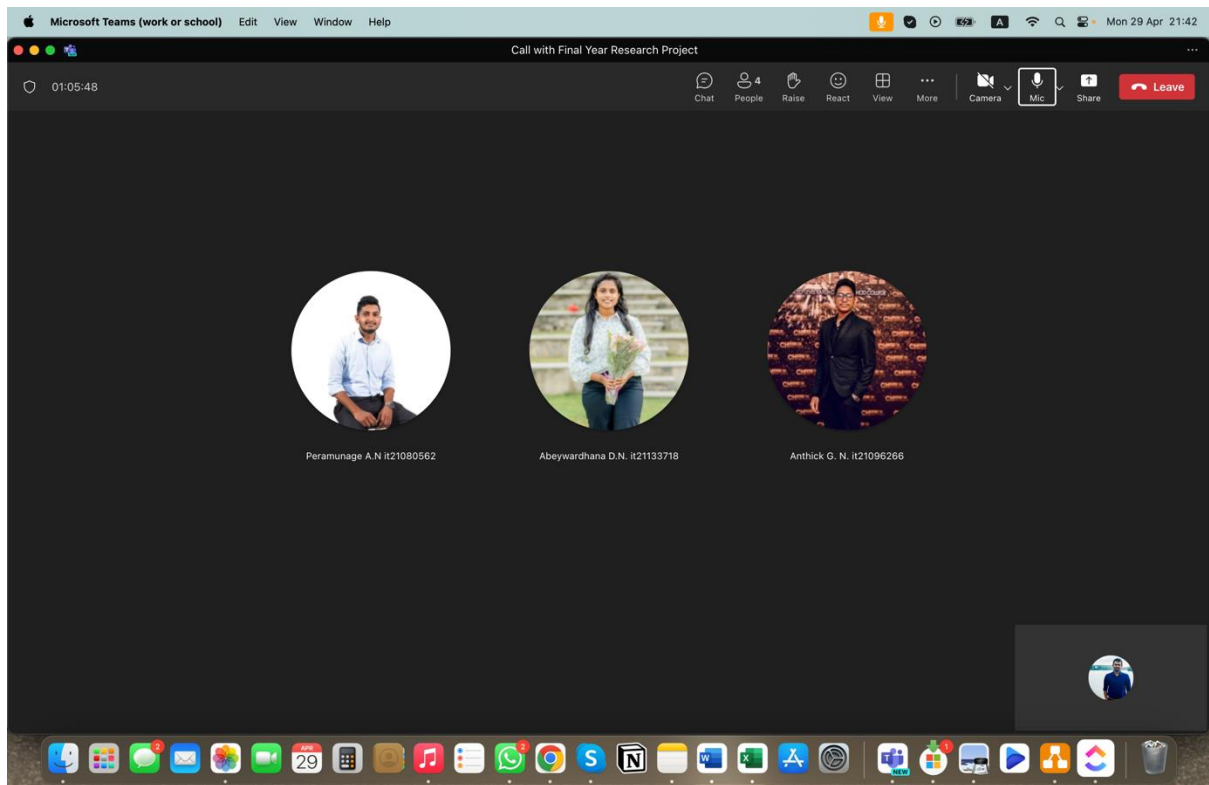




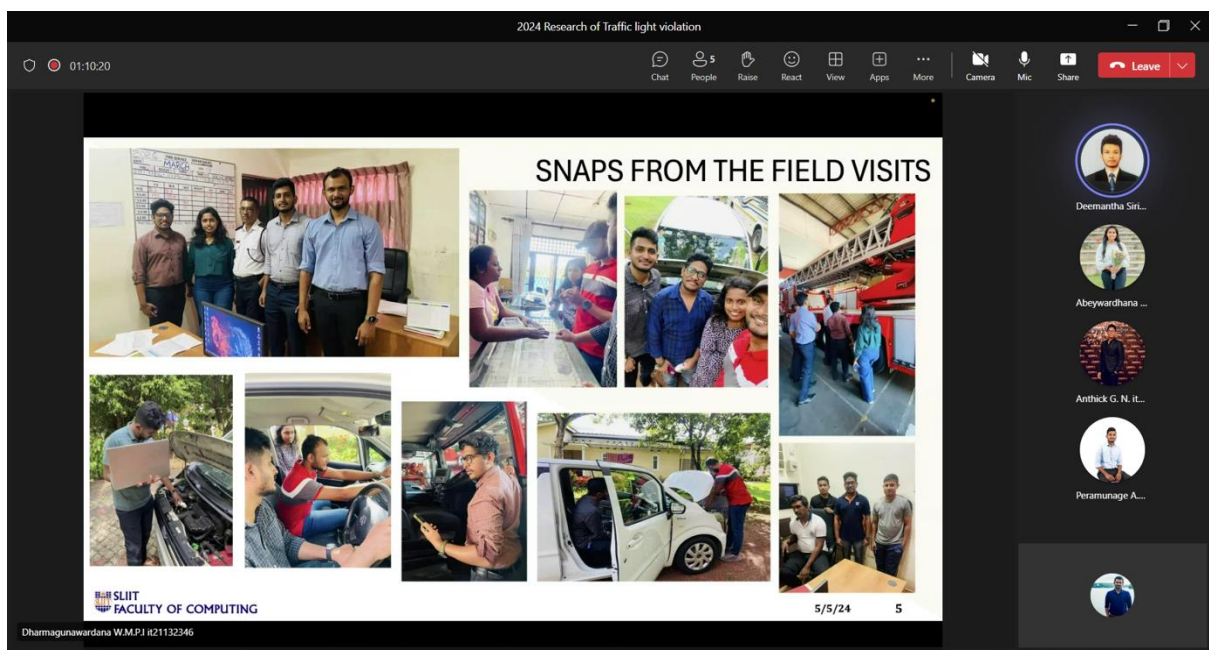
## Code review with co-supervisor



## Group meeting with group membwes



Presentation review with supervisor





## Meetings with Domain Experts

Meeting With fire department officers and staff.

Mr.Nanayakkara chief office of Fire department and discuss about the domain knowledge and requirements.



	january	february	march	april	may	june	july	august	september	october	november	december	TOTAL
FIRE CALL	38	31	48	10	24	12	25	25	24	21	16	25	299
RESCUE CALL	2	1	5	2	1	2	0	2	4	2	3	2	26
EMERGENCY CALL	6	1	0	1	8	0	0	3	2	9	2	5	37
AMBULANCE CALL	0	1	2	0	2	0	1	2	0	1	6	9	24
VIP DUTIES	37	37	45	1	1	2	15	33	32	38	32	33	306
SPECIAL SERVICE	24	19	12	11	2	7	1	6	6	5	10	20	123
TEST CALL	3	3	3	0	1	5	1	2	5	5	7	9	44
INSPECTION OF DANGER PLASE	0	0	0	0	0	0	0	0	0	39	16	40	95
TOTAL	110	93	115	25	39	28	43	73	73	120	92	143	954

prepared by - K.T.S.Fernando

K.P.P.R Nanayakkara Control Room officer	A.P.J.Preethilal Station officer (Communication)	W.S.R.N Senanayake Divisional fire officer (Operation)	P.D.K.A.Wilson Chief fire officer
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## Snapshots from Field Visit







# Clickup Tasks Allocation

Research - 058

Inbox

Docs

Dashboards

Clips

Timesheets

More

Favorites

Spaces

Everything

Team Space

Research 2024 -058

Glen IT21096266

List

Aveen IT21080562

Dewmini IT21133718

Pasindu IT21132346

View all Spaces

Invite

Research 2024 -058 / Glen IT21096266 / List

Share Automations

Search

Board Calendar Gantt Team List View

Group: Status Subtasks: Collapse all Columns Filters Me mode Assignees Show closed Hide

Search tasks

COMPLETE 5

optimal path suggestion

nearest fire department identification

Fire department location data collection and data set creation

fire department resource data collection

Web application Wireframes Design 3

Add Task

IN PROGRESS 1

fire department resource allocation prediction with the severity of the fire.

Add Task

PLANNING 2

Add Task

# CkickUp Dashboard

Dashboards / Dashboard / Total Tasks by Assignee

Refreshed just now

Unassigned 44.11%

it21132346 Dharmagunawardana W.M.P.I 20.58%

it21096266 Anthick G. N. 17.64%

it21133718 Abeywardhana D.N. 8.82%

it21080562 Peramunage A.N 8.82%

it21096266 Anthick G. N.

6 TASKS

	ASSIGNEE	DUE DATE	STATUS
optimal path suggestion			COMPLETE
nearest fire department identification			COMPLETE
fire department resource allocation prediction with the severity of the fire.			IN PROGRESS
Fire department location data collection and data set creation			COMPLETE
fire department resource data collection			COMPLETE
Web application Wireframes Design 3			COMPLETE

## In Progress Tasks

15 TASKS	ASSIGNEE	DUE DATE	STATUS
Implement the Fire sensor			PLANNING
create a circuit Diagram			PLANNING
create a mobile app <span>1/2</span>			IN PROGRESS
Fire severity data set creation			IN PROGRESS
mobile app Design <span>2/2</span>			IN PROGRESS
Train the model			IN PROGRESS
Fire prediction data set creation <span>1/1</span>			IN PROGRESS
fire Prediction model			IN PROGRESS
fire prediction data collection			IN PROGRESS
fire department resource allocation prediction with the severity of the fire.			IN PROGRESS
Web Application Wireframes Design			IN PROGRESS
Add few more sensors and increase the accuracy			PLANNING
fire prediction monitoring IOT device <span>1/1</span>			IN PROGRESS
Mobile Application Design			IN PROGRESS
Fire severity model creation			PLANNING

## Completed Tasks upto PP1

13 TASKS	ASSIGNEE	DUE DATE	STATUS
Uploaded a Blinking program to the ESP32			COMPLETE
Arduino IDE download and setup <span>1/1</span>		Apr 22	COMPLETE
Fire sensor Integration with ESP32		Apr 22	COMPLETE
optimal path suggestion			COMPLETE
nearest fire department identification			COMPLETE
Fire department location data collection and data set creation			COMPLETE
fire department resource data collection			COMPLETE
Draw Swimlane chart			COMPLETE
Create a swimlane diagram			COMPLETE
Web application Wireframes Design <span>3/3</span>			COMPLETE
Swimlane chart design			COMPLETE
Web Application Wireframes Design			COMPLETE
Fire department data collection			COMPLETE



# Project Implementation

## Data Collection

Collecting Fire department vehicle data.



## Datasets

From Fire Department

vehicle_registered	department_regi	station	vehicle_type	fuel_capacity_litre	fuel_consumption_Km	approved_monthly_fuel_quantity_litre	water_capacity_heigh	foam_capacity_heigh	max_height_lif	none_user_vehicle
41-3154		60 H	Water Carrier	99	3 unlimited		6750 L	N/A	N/A	N
41-6595		94 H	Water Carrier	116	3 unlimited		6750 L	N/A	N/A	N
41-9077		108 3	T T Ladder	200	15 unlimited		N/A	N/A	45 M	Y
43-6259		113 1	Canter	90	6 unlimited		N/A	N/A	N/A	N
47-2272		114 3	Canter	90	6 unlimited		N/A	N/A	N/A	N
226-2485		117 1	Sky Lift	300	2 unlimited		N/A	N/A	54 M	Y
JO-9877		124 1	Canter	90	6 unlimited		N/A	N/A	N/A	Y
LA-1272		125 H	Water Carrier	300	3 unlimited		8000 L	N/A	N/A	N
KA-9955		127 H	Car	50	10	200	N/A	N/A	N/A	Y
253-0090		128 H	Double Cab	70	7	150	N/A	N/A	N/A	N
PA-7804		132 H	Rescue Cab	75	5 unlimited		N/A	N/A	N/A	Y
LW-0270		133 H	Ambulance	70	6	300	N/A	N/A	N/A	Y
LW-0271		134 H	Ambulance	70	6	300	N/A	N/A	N/A	Y
LW-0272		135 2	Ambulance	70	6	300	N/A	N/A	N/A	Y
LW-0273		136 1	Ambulance	70	6	300	N/A	N/A	N/A	Y
KE-6158		139 H	Jeep	180	5 unlimited		N/A	N/A	N/A	Y
NA-5685		140 H	Mini Bus	70	6 unlimited		N/A	N/A	N/A	Y
NA-5686		141 H	Mini Bus	70	6 unlimited		N/A	N/A	N/A	Y
LF-1098		143 3	Command Control	100	5 unlimited		N/A	N/A	N/A	Y
LF-1114		144 H	Mobile Workshop	100	5	200	N/A	N/A	N/A	Y
LF-1136		147 H	Boom Truck	200	7	500	N/A	N/A	N/A	Y
LW-0336		148 H	R I V	100	6	500	N/A	N/A	N/A	Y
LW-0343		149 2	R I V	100	6	500	N/A	N/A	N/A	Y
LW-0347		150 3	R I V	100	6	500	N/A	N/A	N/A	Y
PB-5971		151 H	Double Cab	80	8	150	N/A	N/A	N/A	Y
LF-7192		152 2	High Ankle Rescue	180	6	150	N/A	N/A	N/A	Y

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Fire\_departments\_Colombo

Total\_vehicle

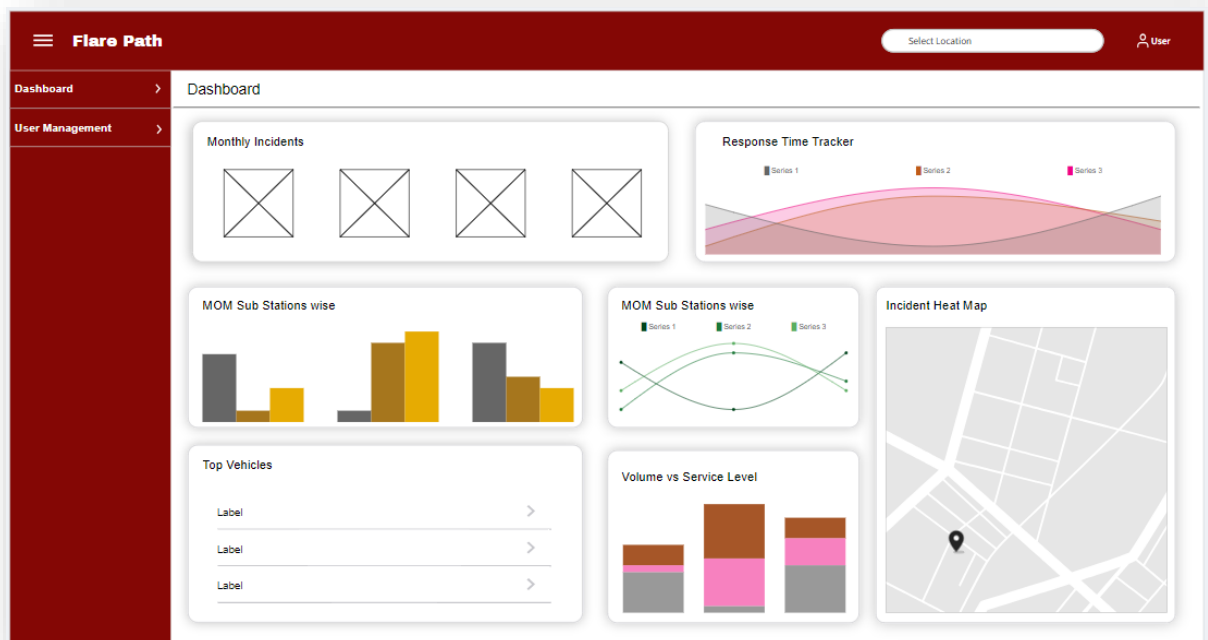
Vehicle\_details

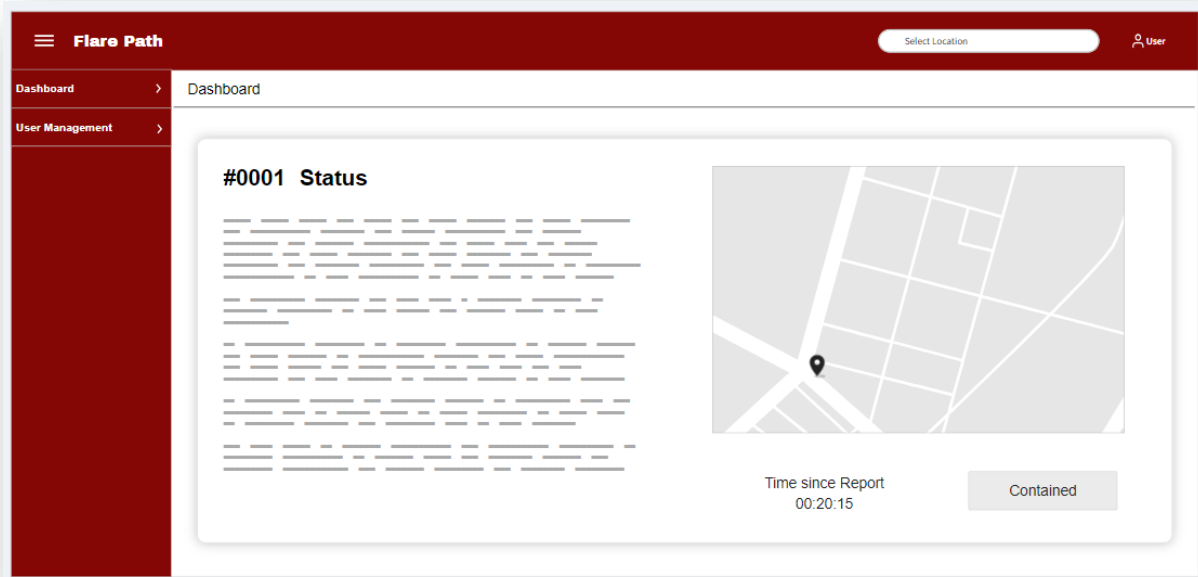
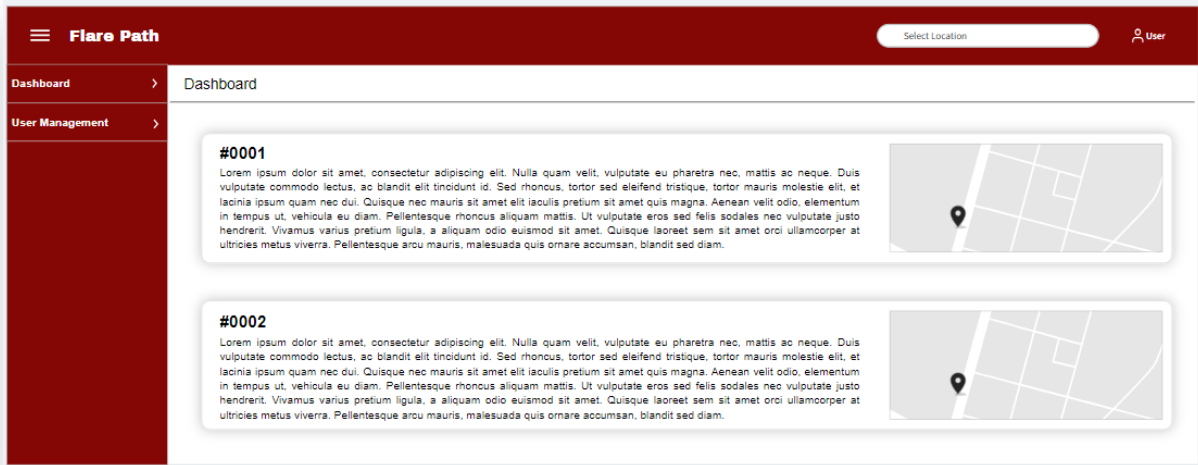


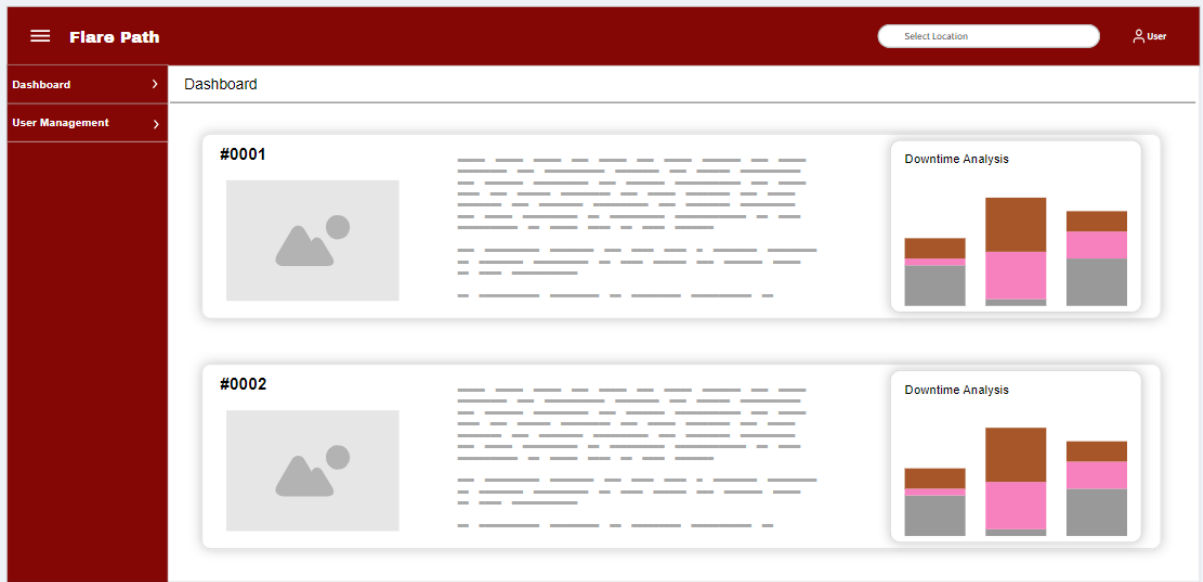
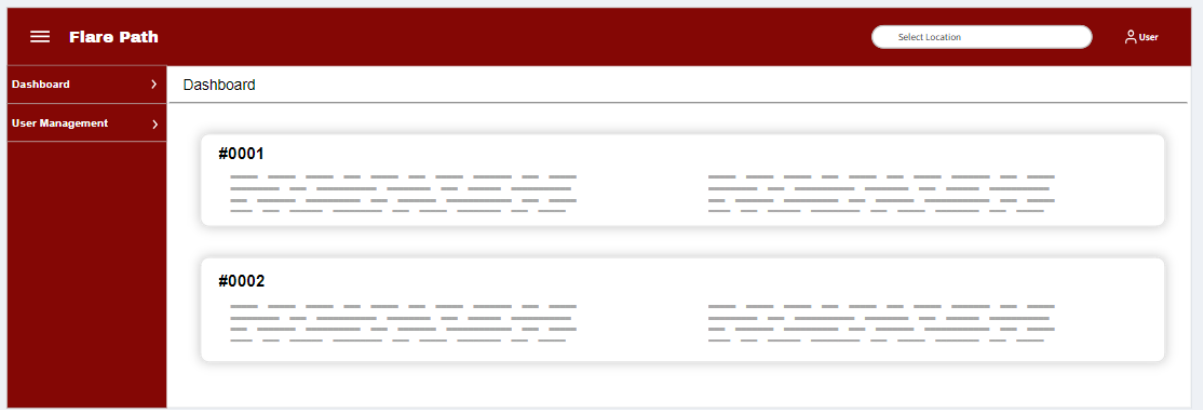
## From RDA

ROUTE NO	ROAD NAME	ALL LENGTHS ARE IN KILOMETRES								
		FROM	TO	PARTIAL ROAD LENGTH	TOTAL ROAD LENGTH	EE_DIVISION	CER_NAME	PROVINCE	SUB TOTAL OF PARTIAL ROAD LENGTHS	
(1.0) WESTERN PROVINCE										
(1.1) COLOMBO										
(1.1.1) AVISSAWELLA										
B030.10	Approach Roads to Public Buildings (Avisawella)	0.00	0.80	0.80	0.80	Avisawella	COLOMBO	WESTERN		
B123	Galagedera - Horana	0.00	19.05	19.05	19.05	Avisawella	COLOMBO	WESTERN		
B145	Hanwella Junction Road	0.00	0.80	0.80	0.80	Avisawella	COLOMBO	WESTERN		
B188	Kaluaggala - Labugama	0.00	14.00	14.00	14.00	Avisawella	COLOMBO	WESTERN		
B239	Kottawa - Talagala	0.00	15.48	15.48	15.48	Avisawella	COLOMBO	WESTERN		
B267	Mampe - Kottawa	0.00	6.23	6.23	6.23	Avisawella	COLOMBO	WESTERN		
B285	Meepe - Ingiriya	0.00	18.09	18.09	18.09	Avisawella	COLOMBO	WESTERN		
B291	Mirihana - Udahamulla - Nawinna	0.00	3.38	3.38	3.38	Avisawella	COLOMBO	WESTERN		
B335	Old Bazaar Road, Maharagama	0.00	0.80	0.80	0.80	Avisawella	COLOMBO	WESTERN		
B354	Panagoda - Henpita	0.00	6.44	6.44	6.44	Avisawella	COLOMBO	WESTERN		
B367	Piliyandala - Maharagama	0.00	7.37	7.37	7.37	Avisawella	COLOMBO	WESTERN		
B389	Ratmalana - Mirihana	4.83	8.05	3.22	8.05	Avisawella	COLOMBO	WESTERN		
B426	Tummodera - Puwakpitiya	0.00	9.65	9.65	9.65	Avisawella	COLOMBO	WESTERN		105.31
(1.1.2) COLOMBO MUNICIPAL COUNCIL (C.M.C)										
B084	Colombo - Horana	0.00	28.01	28.01	28.01	C.M.C.	COLOMBO	WESTERN		28.01
(1.1.3) COLOMBO										
B011	Allan Avenue, Dehiwela	0.00	1.96	1.96	1.96	Colombo	COLOMBO	WESTERN		

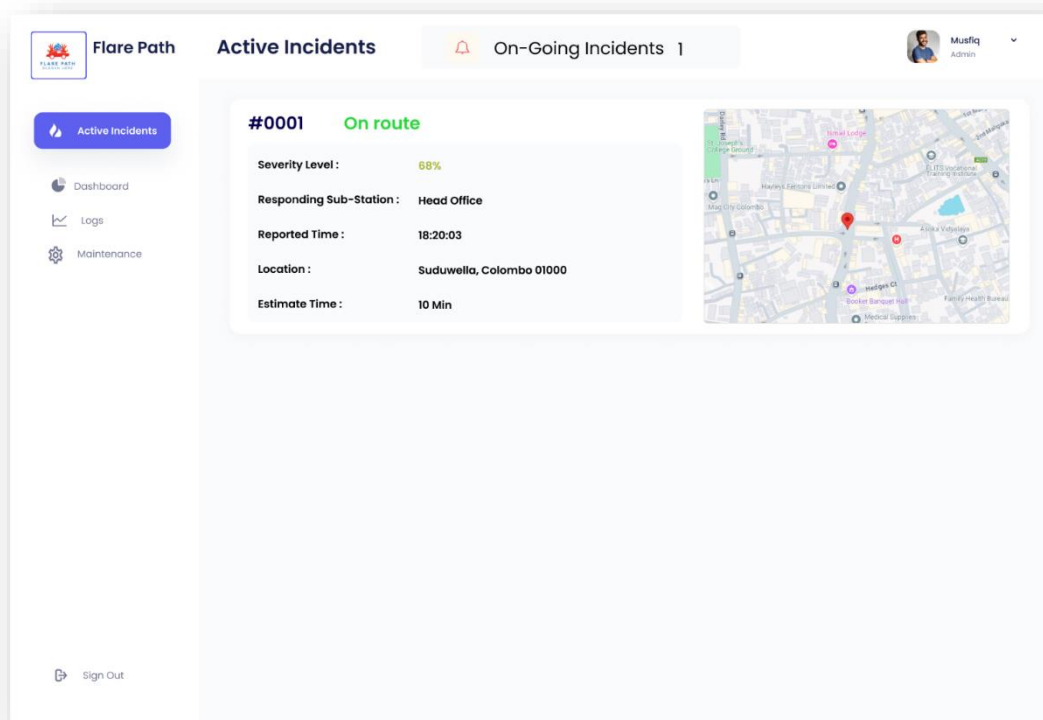
## Wireframes








# Mobile Application UI











Flare Path

Resources



On-Going Incidents 0



Musfiq

Admin

Active Incidents

Dashboard

Logs

Resources


Sign Out

Export

Q

Search by vehicle no

LA-1272




Non user vehicle : YES

Under maintenance : NO


Location : Head Office

Maintenance Schedule date : 05/05/2024

Downtime Analysis



PZA-0019



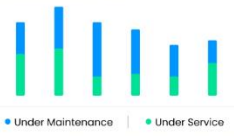
Non user vehicle : YES

Under maintenance : NO


Location : Hettiyawatta

Maintenance Schedule date : 05/07/2024

Downtime Analysis



ZA-5436




Non user vehicle : NO

Under maintenance : YES

Location : Grandpass

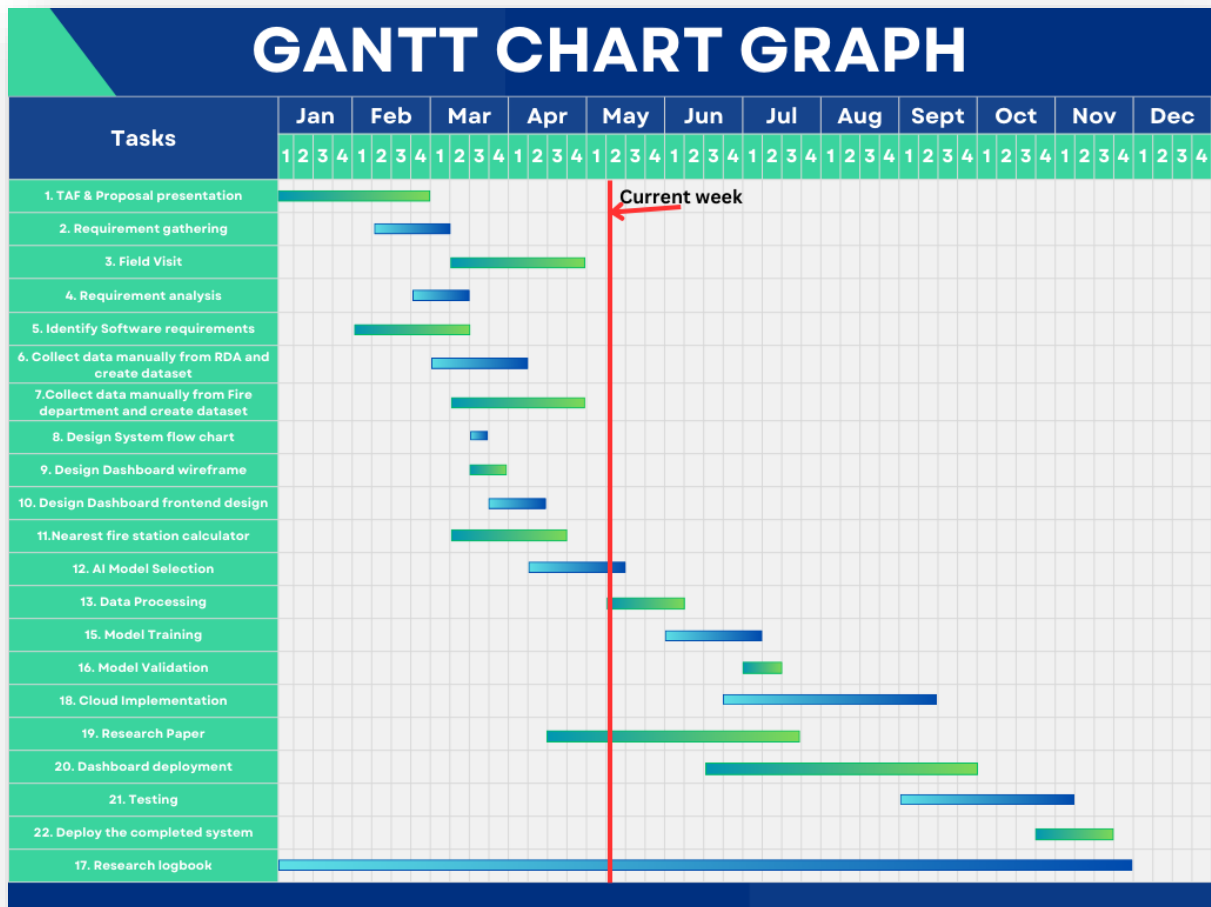
Maintenance Schedule date : 05/07/2024

Downtime Analysis



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## Gantt Chart



# Work Breakdown Structure

