

Sri Lanka Institute of Information Technology



R24-059

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Table of Contents

Table of Contents	i
Table of Figures	ii
Project Component and Current Status	Error! Bookmark not defined.
Progress	Error! Bookmark not defined.
Team Communication	2
Teams Channel.....	2
Teams Calls with the Research Team	2
Online Calls with Supervisors (Teams)	5
Phone Calls with External Supervisor	7
Phone Calls with CDA Officers	7
Physical Meetings with Group Members.....	9
WhatsApp Group Creation	10
Project Timeline.....	12
Work Break-Down	13

Table of Figures

Figure 1-[A] Perfect Condition	1
Figure 2 - [C] Not Suitable	1
Figure 3- [B] Moderate	1
Figure 4: Prediction.	1
Figure 5: Teams Channel	2
Figure 6: Teams Calls with the Team 1	2
Figure 7: Teams Calls with the Team 2	3
Figure 8: Teams Calls with the Team 3	3
Figure 9: Teams Calls with the Team 4	4
Figure 10: Teams Calls with the Team 5	4
Figure 11: Teams Calls with Supervisors Example 1	5
Figure 12: Teams Calls with Supervisors Example 2	5
Figure 13: Teams Calls with Supervisors Example 3	6
Figure 14: Teams Calls with Supervisors Example 4	6
Figure 15: Phone Calls with External Supervisor	7
Figure 16: Phone Calls with CDA Officers.....	7
Figure 17 Physical meetings with team members	9
Figure 18WhatsApp Group Creation(2)	10
Figure 19WhatsApp Group Creation (1)	10
Figure 20WhatsApp Group Creation(3)	10
Figure 21WhatsApp Group Creation(4)	11
Figure 22: Gantt Chart	12
Figure 23 Work Break-Down.....	13

Project Component and Current Status

Component: Coconut (Copra) Variety Assistant

Progress

In My Component, the system mainly focuses on predicting the quality of the copra based on three categories.

Copra Quality Levels:

- Level 1: Define the characteristics of "perfect condition" copra for oil production. Category - [A]
- Level 2: Specify the characteristics of "moderate" copra and its suitability for oil production. Category - [B]
- Level 3: Define the characteristics of copra considered "not most suitable" for oil production. Category - [C]



Figure 1-[A] Perfect Condition



Figure 3-[B] Moderate



Figure 2-[C] Not Suitable

```
1 model = model_from_json(json.dumps(model.to_json()))
2 # load weights into the model
3 model.load_weights('model/copra_quality_detection_model.h5')
4
5 img_height = 299
6 img_width = 299
7
8 # load the image files
9 images = ['val_dataset\\IMG_2006.JPG', 'val_dataset\\IMG_2024.JPG', 'val_dataset\\IMG_2047.JPG']
10 for img_path in images:
11     img = image.load_img(img_path, target_size=(img_height, img_width))
12
13     # Preprocess the image
14     img_array = image.img_to_array(img)
15     img_array = np.expand_dims(img_array, axis=0) # Add batch dimension
16     img_array = img_array / 255.0 # normalize pixel values
17
18     # Make predictions
19     predictions = model.predict(img_array)
20
21     # Print the predicted class
22     predicted_class = np.argmax(predictions)
23     print(f'Predicted class: {predicted_class}')
24
25 # Run the code
26
```

recreated. Please use tf.nn.max_pool2d instead.

1/1 [=====] - 10s 10s/step
Image Path: val_dataset\\IMG_2006.JPG
Predicted class: A

1/2 [=====] - 0s 175ms/step
Image Path: val_dataset\\IMG_2024.JPG
Predicted class: B

1/3 [=====] - 0s 163ms/step
Image Path: val_dataset\\IMG_2047.JPG
Predicted class: C

PS C:\Users\Venkura\Downloads\Copra Quality Prediction Model>

Figure 4: Prediction.

Team Communication

The team chose Microsoft Teams as their primary communication channel, forming a dedicated Team with all four group members. We also used Zoom to communicate with supervisors, provide updates, and receive comments on the project's progress. Regular team conversations were arranged to discuss, share knowledge, and plan.

The crew also used WhatsApp as an additional tool to constantly communicate with their supervisors. This enabled timely updates and cooperation between the supervisor and co-supervisor, ensuring everyone was informed and on the same page throughout the project.

Teams Channel

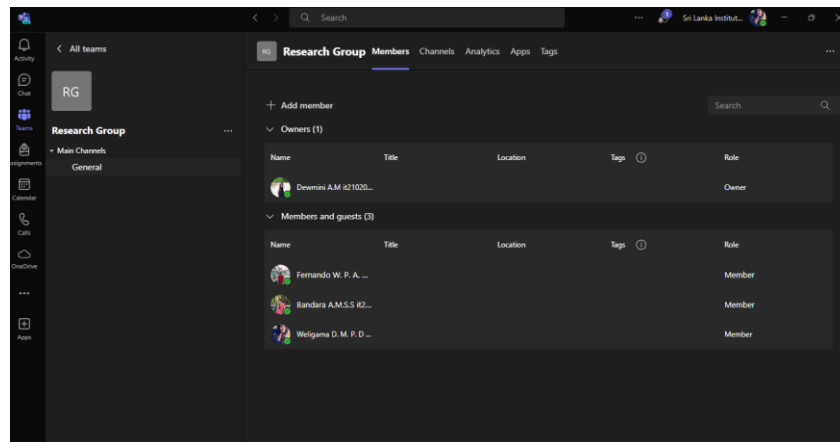


Figure 5: Teams Channel

Teams Calls with the Research Team

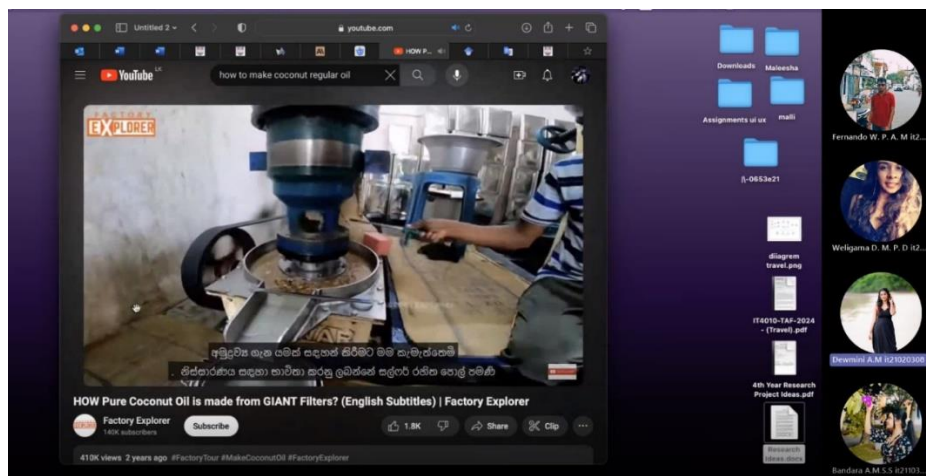


Figure 6: Teams Calls with the Team 1

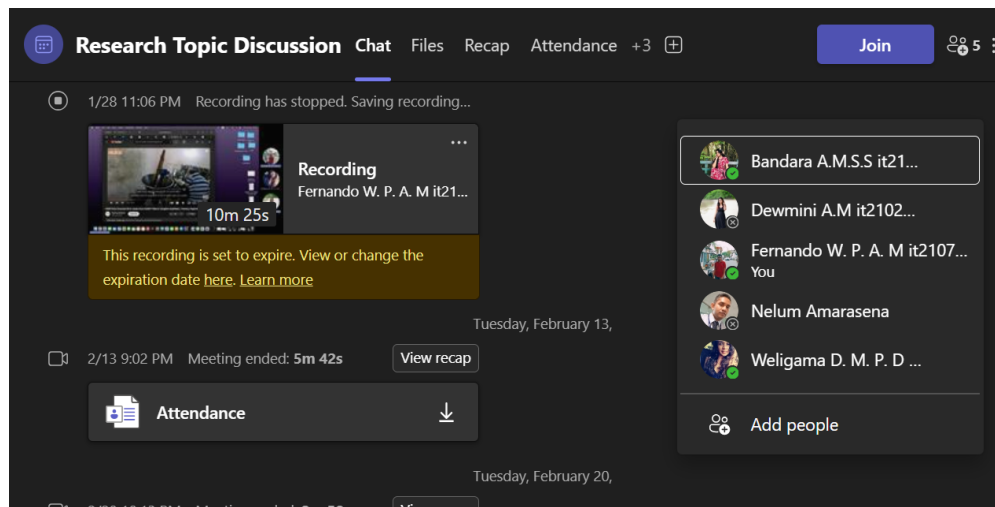


Figure 7: Teams Calls with the Team 2

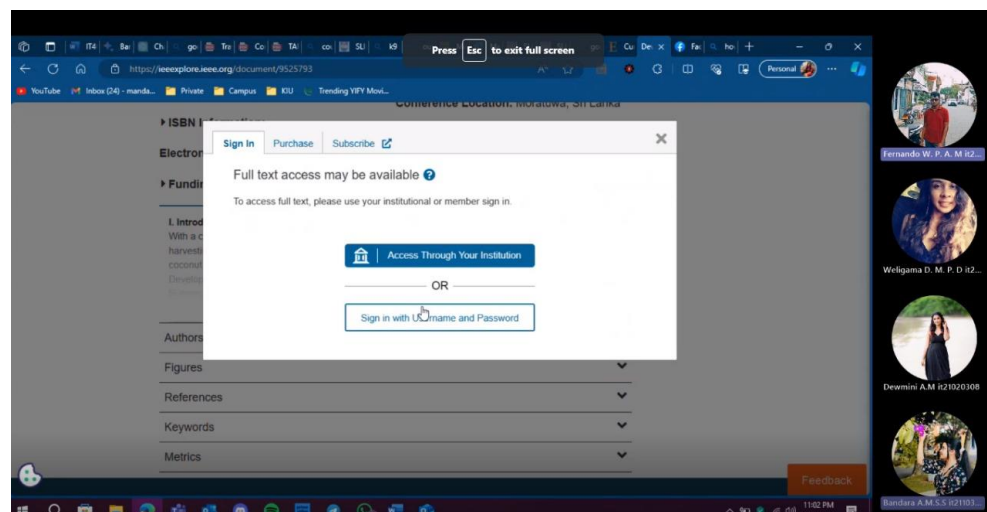


Figure 8: Teams Calls with the Team 3

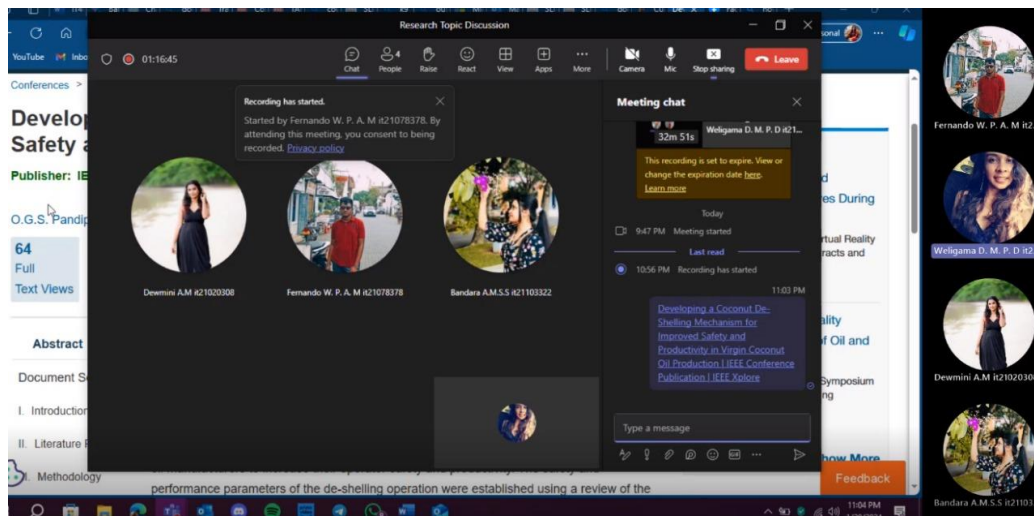


Figure 9: Teams Calls with the Team 4

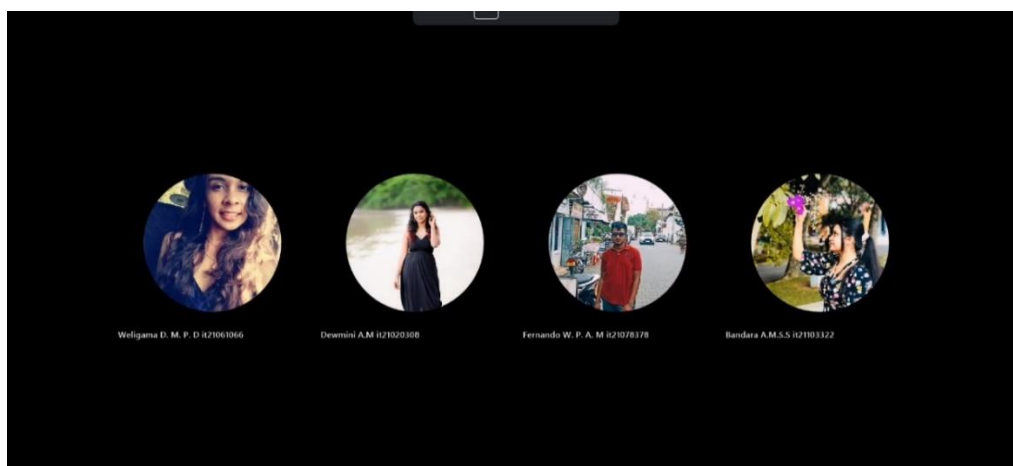


Figure 10: Teams Calls with the Team 5

Online Calls with Supervisors (Teams)

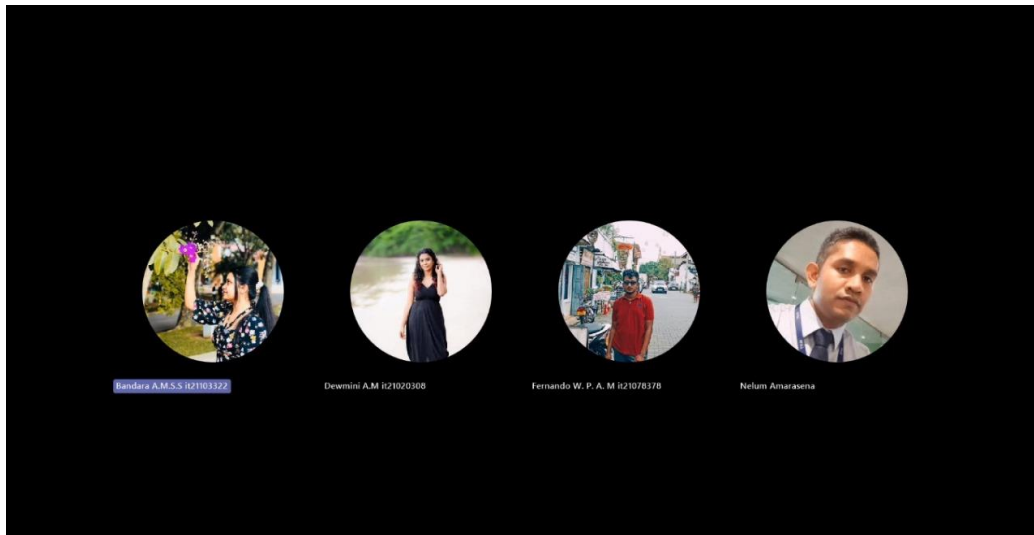


Figure 11: Teams Calls with Supervisors Example 1

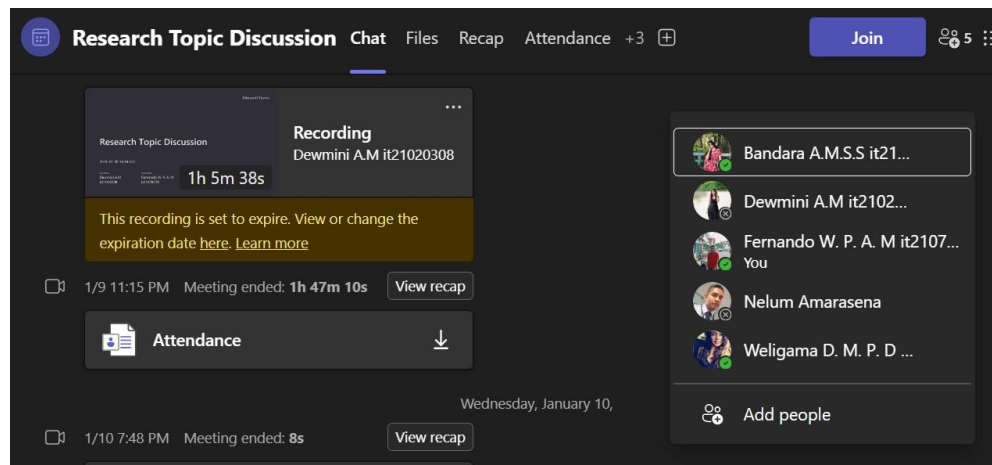


Figure 12: Teams Calls with Supervisors Example 2

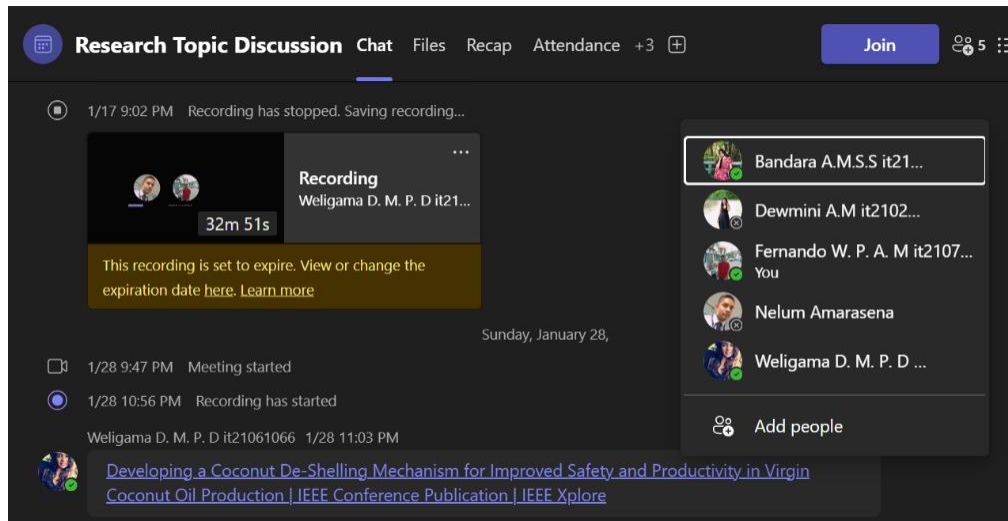


Figure 13: Teams Calls with Supervisors Example 3

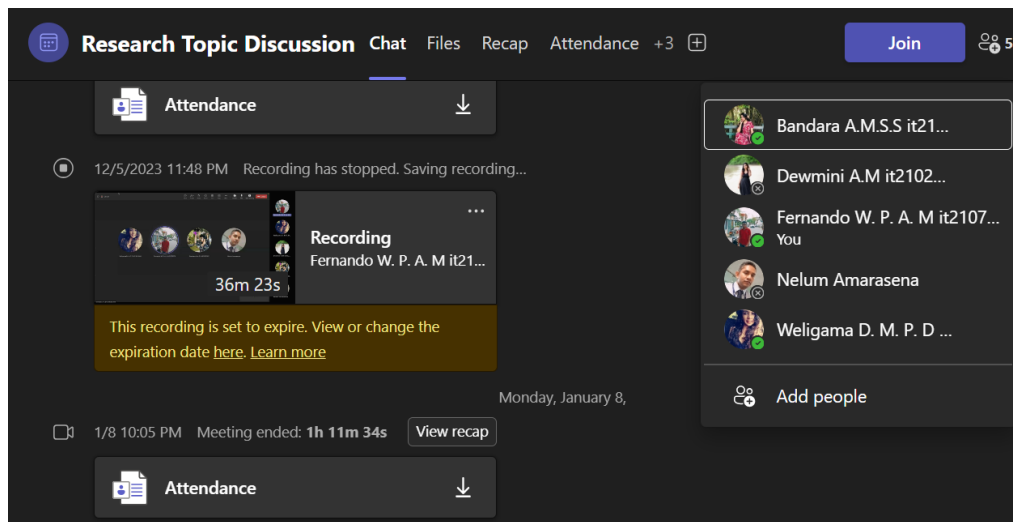


Figure 14: Teams Calls with Supervisors Example 4

Phone Calls with External Supervisor

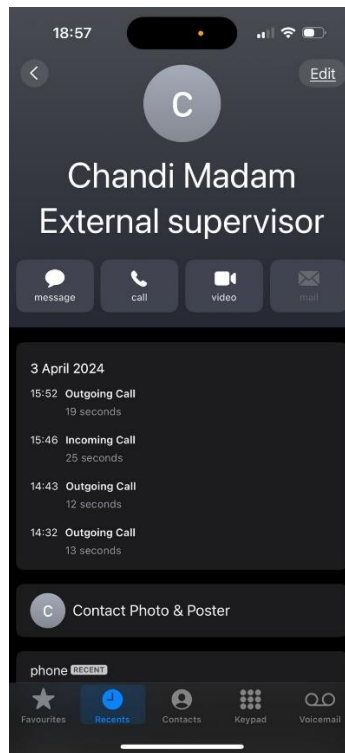


Figure 15: Phone Calls with External Supervisor

Phone Calls with CDA Officers

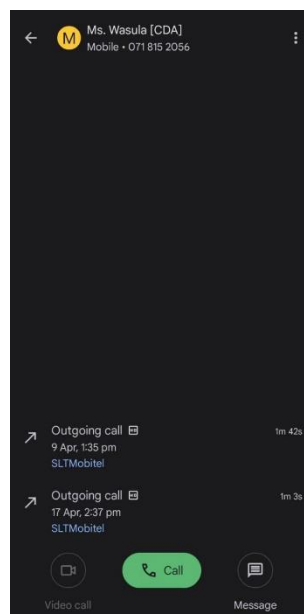
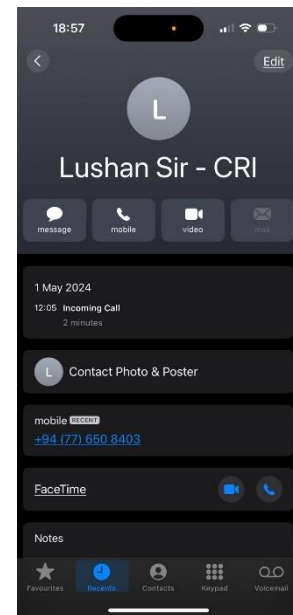
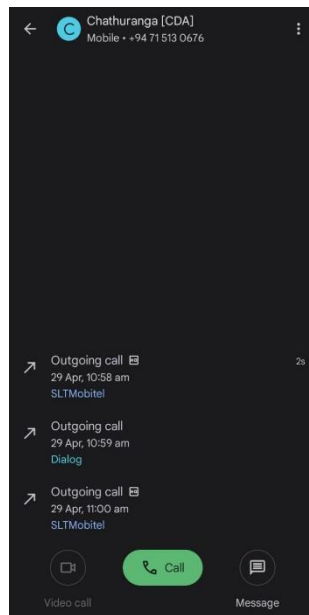
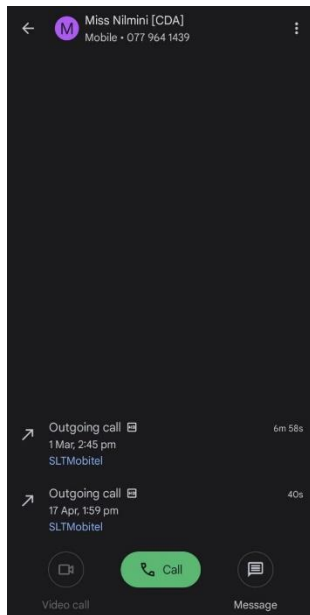


Figure 16: Phone Calls with CDA Officers



Physical Meetings with Group Members

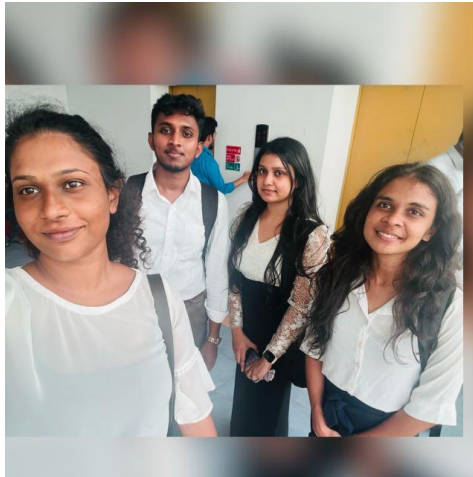


Figure 17 Physical meetings with team members

WhatsApp Group Creation



Figure 19 WhatsApp Group Creation (1)

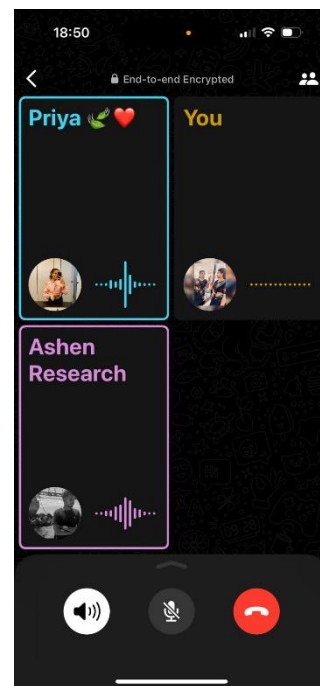


Figure 18 WhatsApp Group Creation (2)



Figure 20 WhatsApp Group Creation (3)

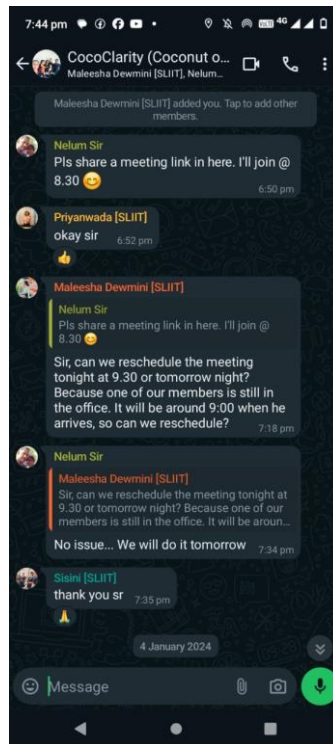


Figure 21WhatsApp Group Creation(4)

Project Timeline

A Gantt chart is a visual tool used in project management to show the timeline of a project. It displays the start and finish dates of the various elements of a project, such as tasks, milestones, and phases, as well as their dependencies.

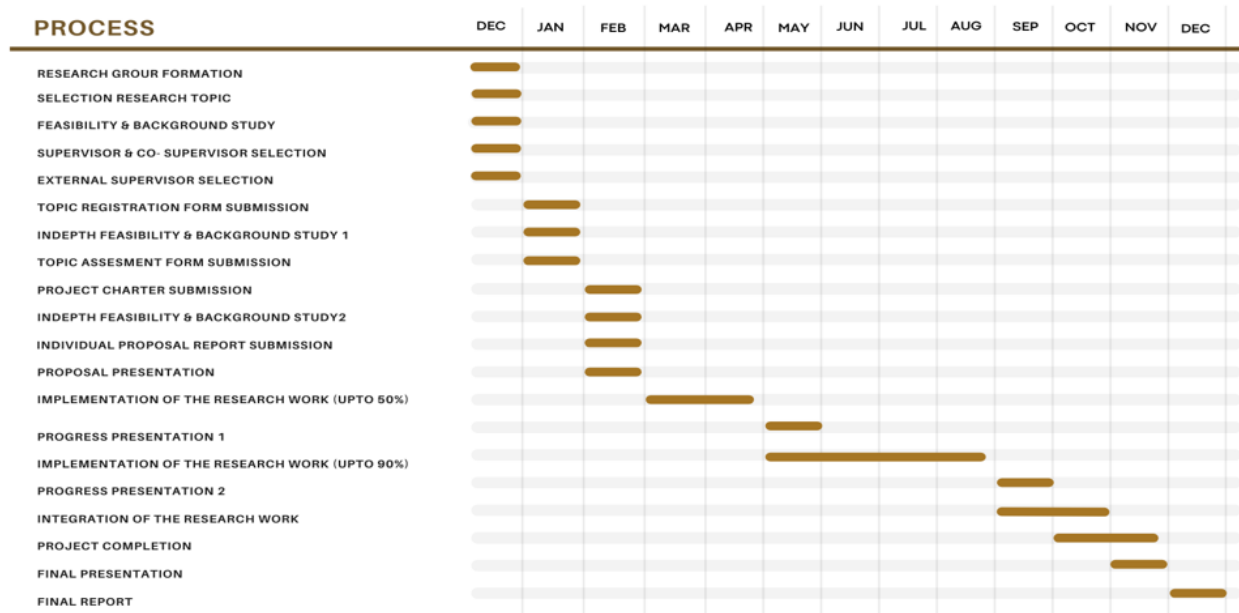


Figure 22: Gantt Chart

Work Break-Down

A work breakdown structure (WBS) is a structured breakdown of a project into smaller, more manageable parts. It is divided into distinct deliverables and tasks that help streamline project planning, execution and project management.

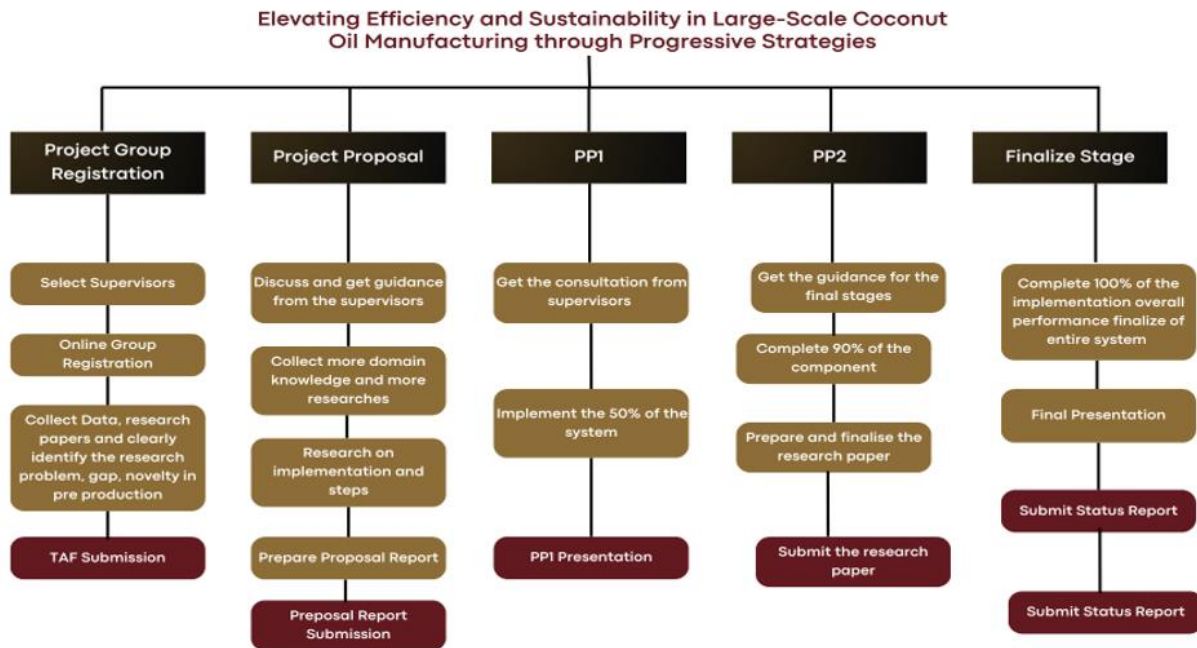


Figure 23 Work Break-Down