



# **IT4010 – Research Project Year 4**

Status Document 1

Submitted to

Sri Lanka Institute of Information Technology

## **Enhancing Personalized E-Learning: A Novel Approach to Adaptive Learning Pathways for Individualized Knowledge Acquisition**

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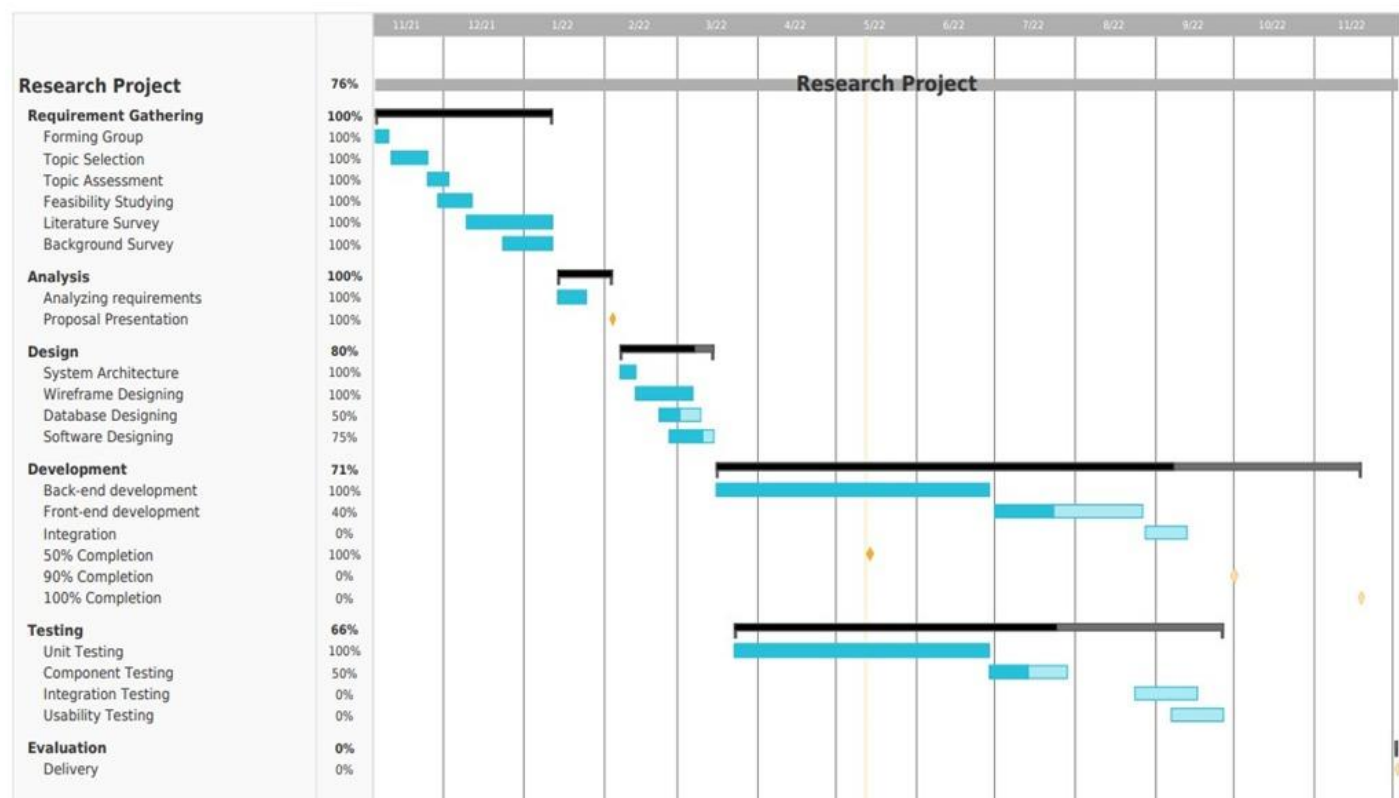
In partial fulfilment of the requirements for the  
Bachelor of Science Special Honors Degree in Information Technology

Date: May 05<sup>th</sup>, 2024

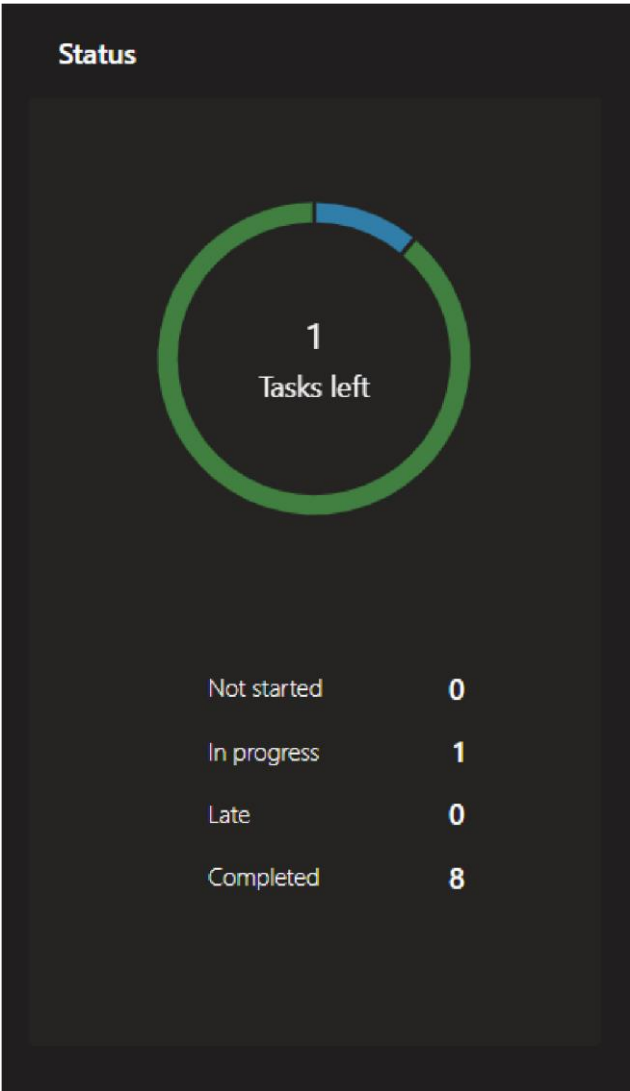
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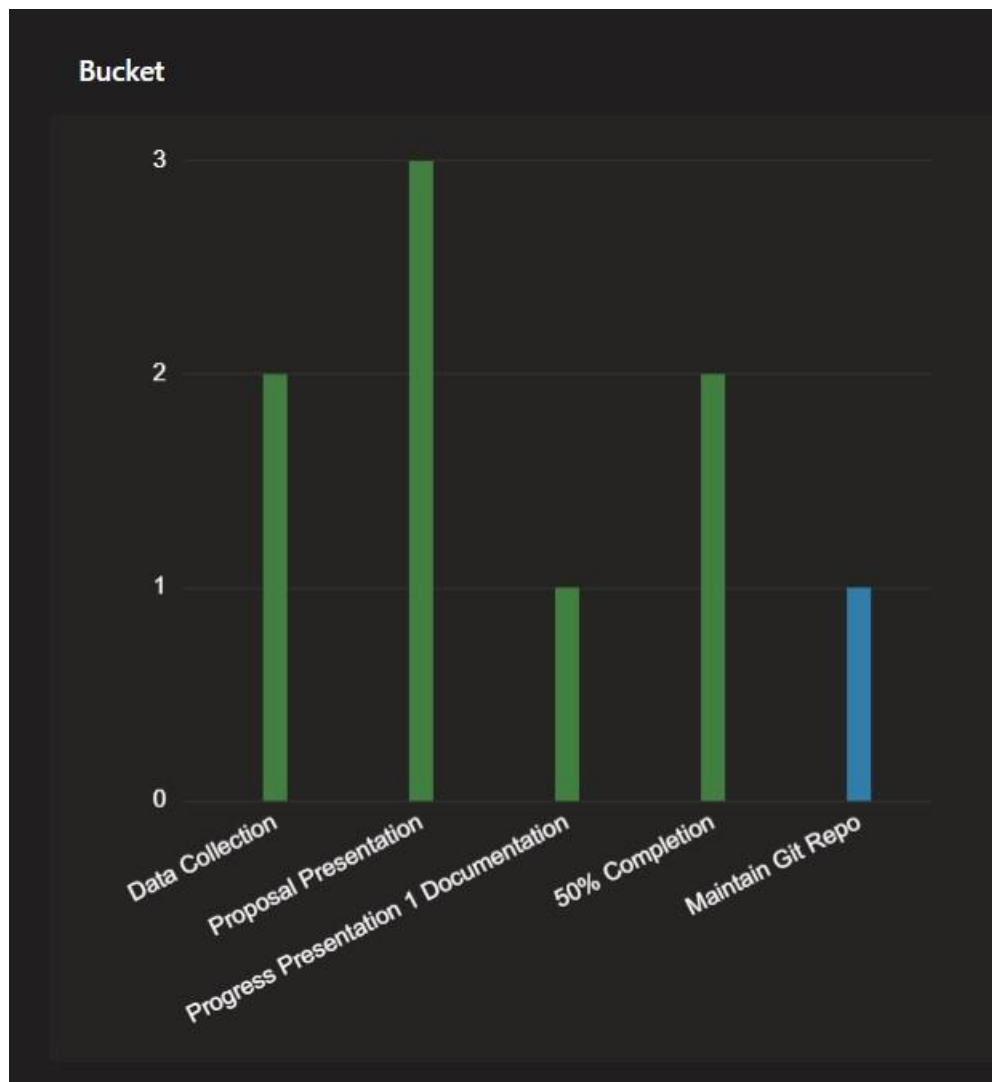
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# Gantt Chart

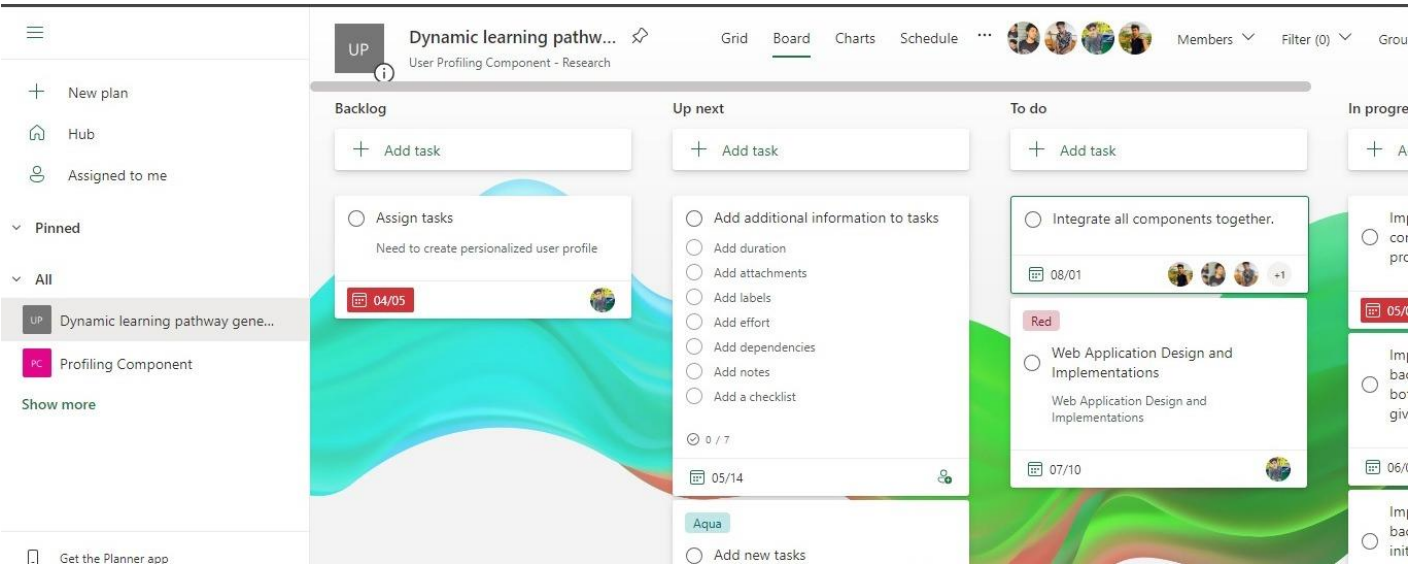


Project View of MS Planner

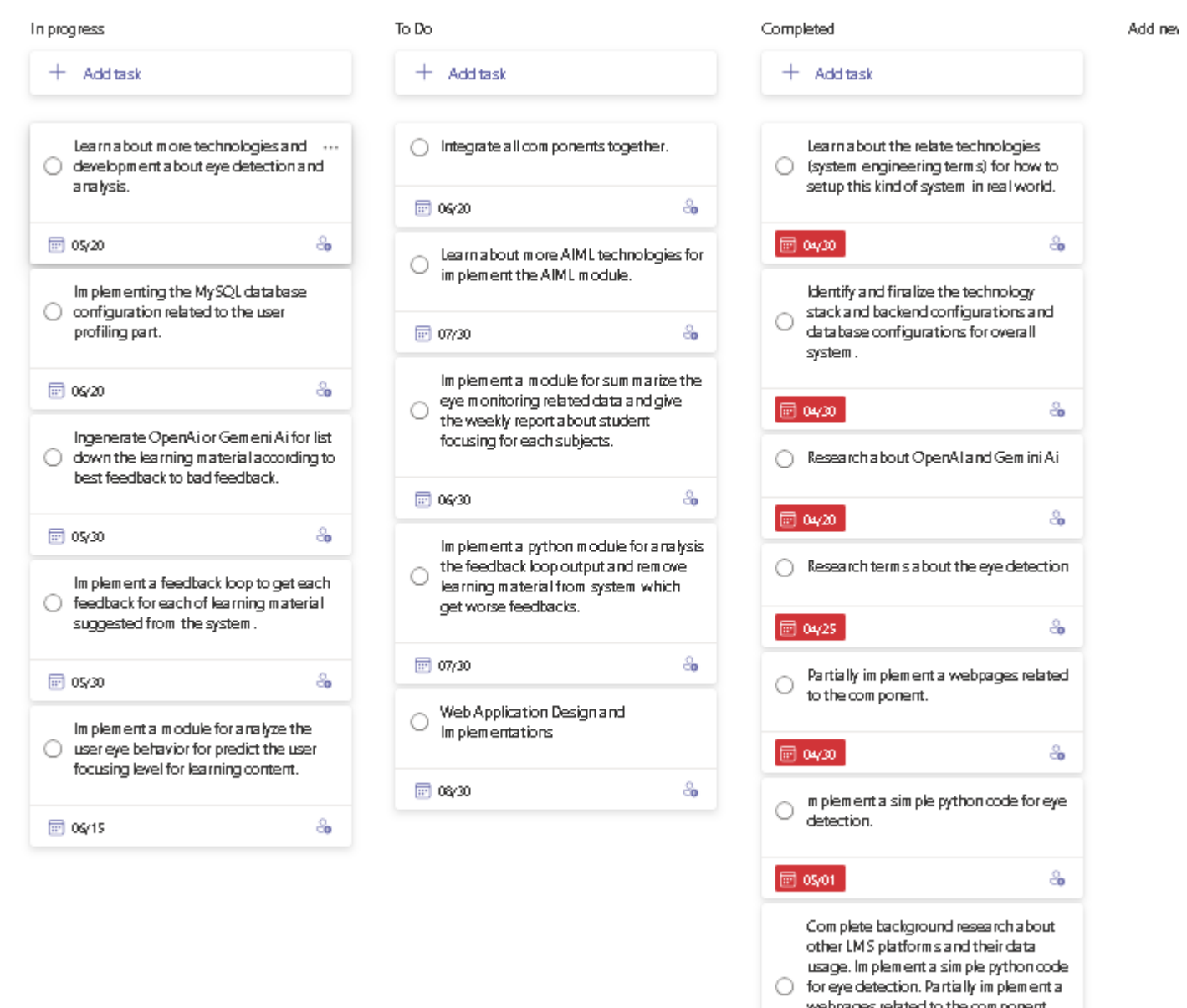




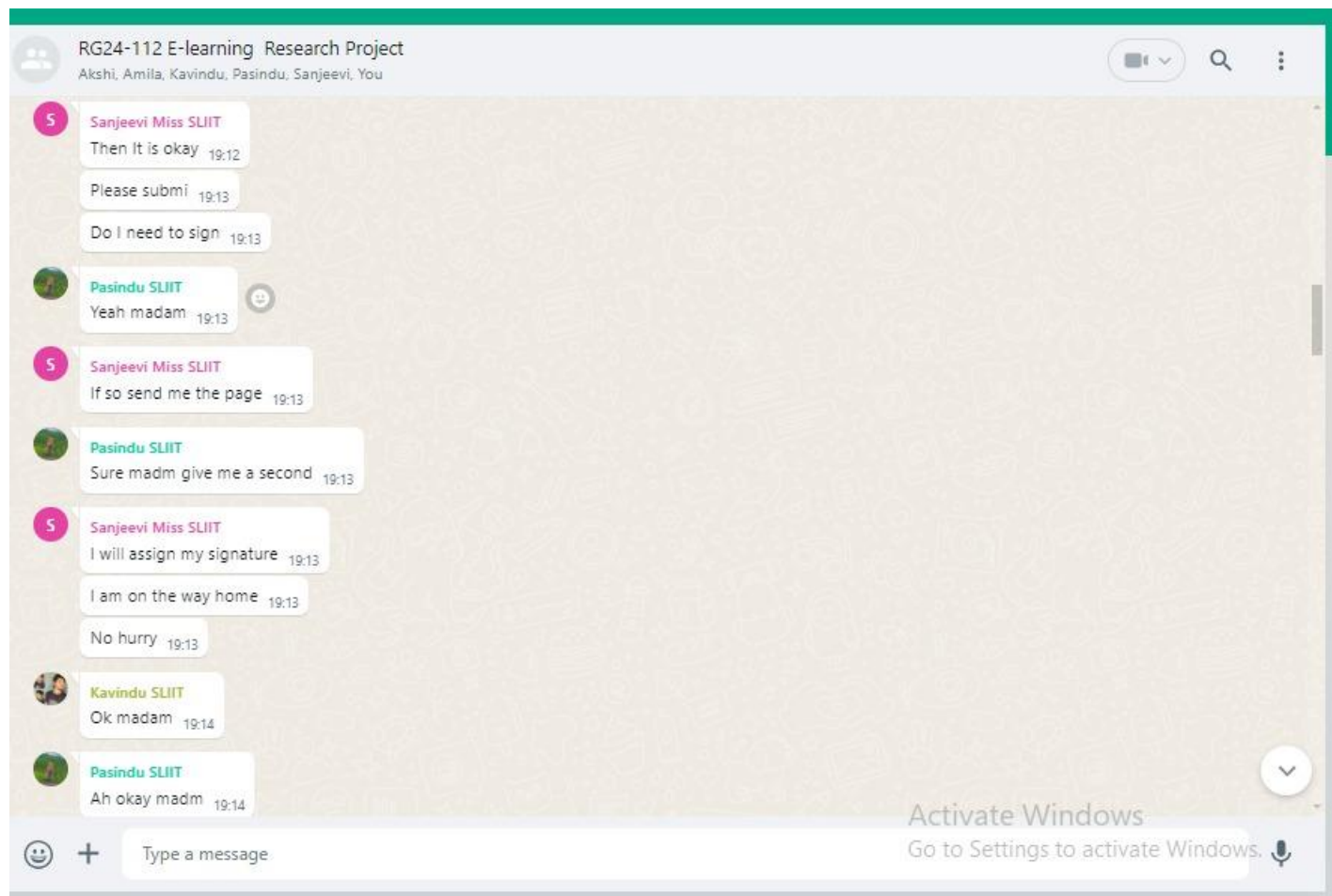
# Task View Of the MS Planner



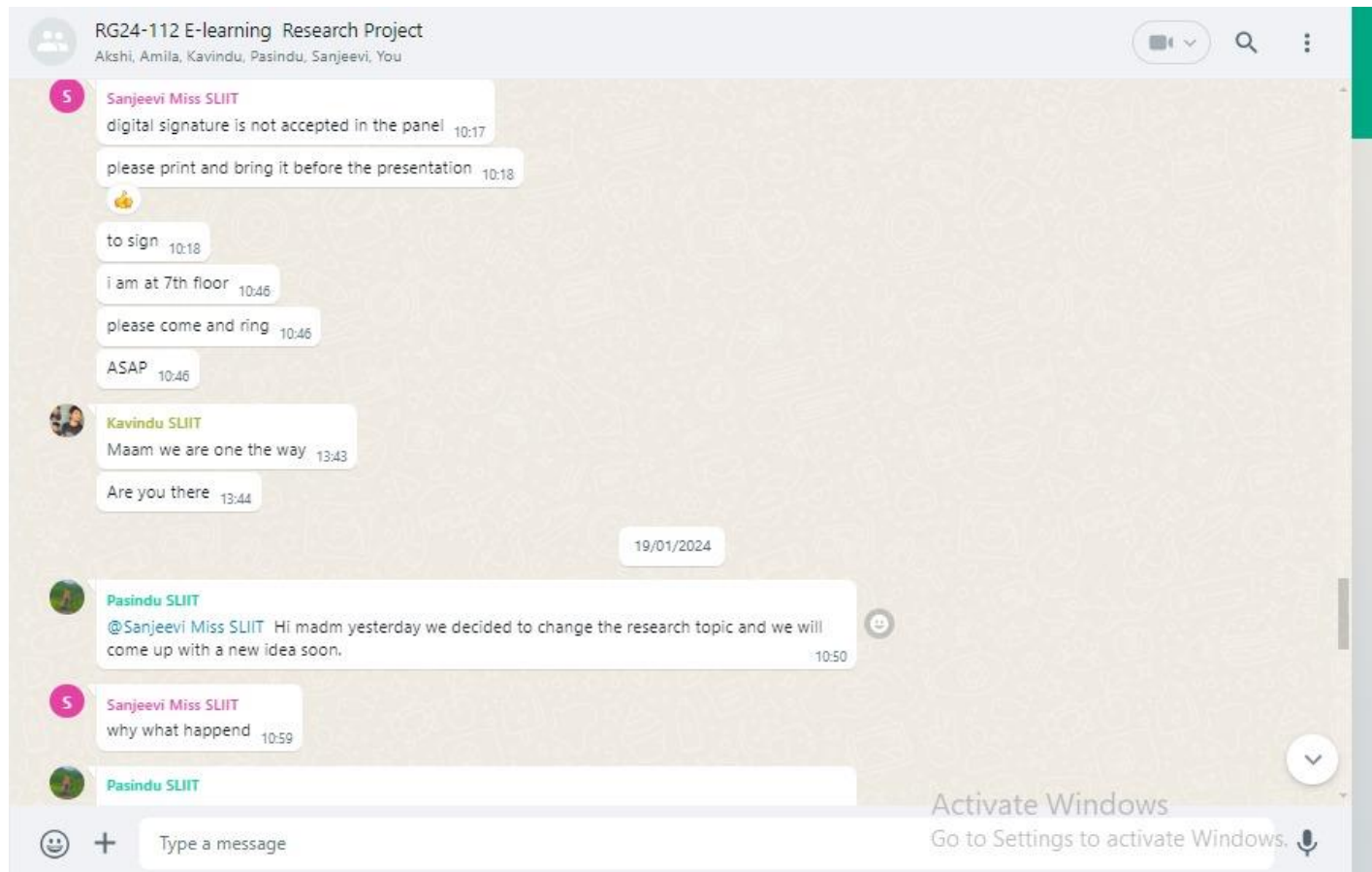
## Work Breakdown Structure of MS Planner

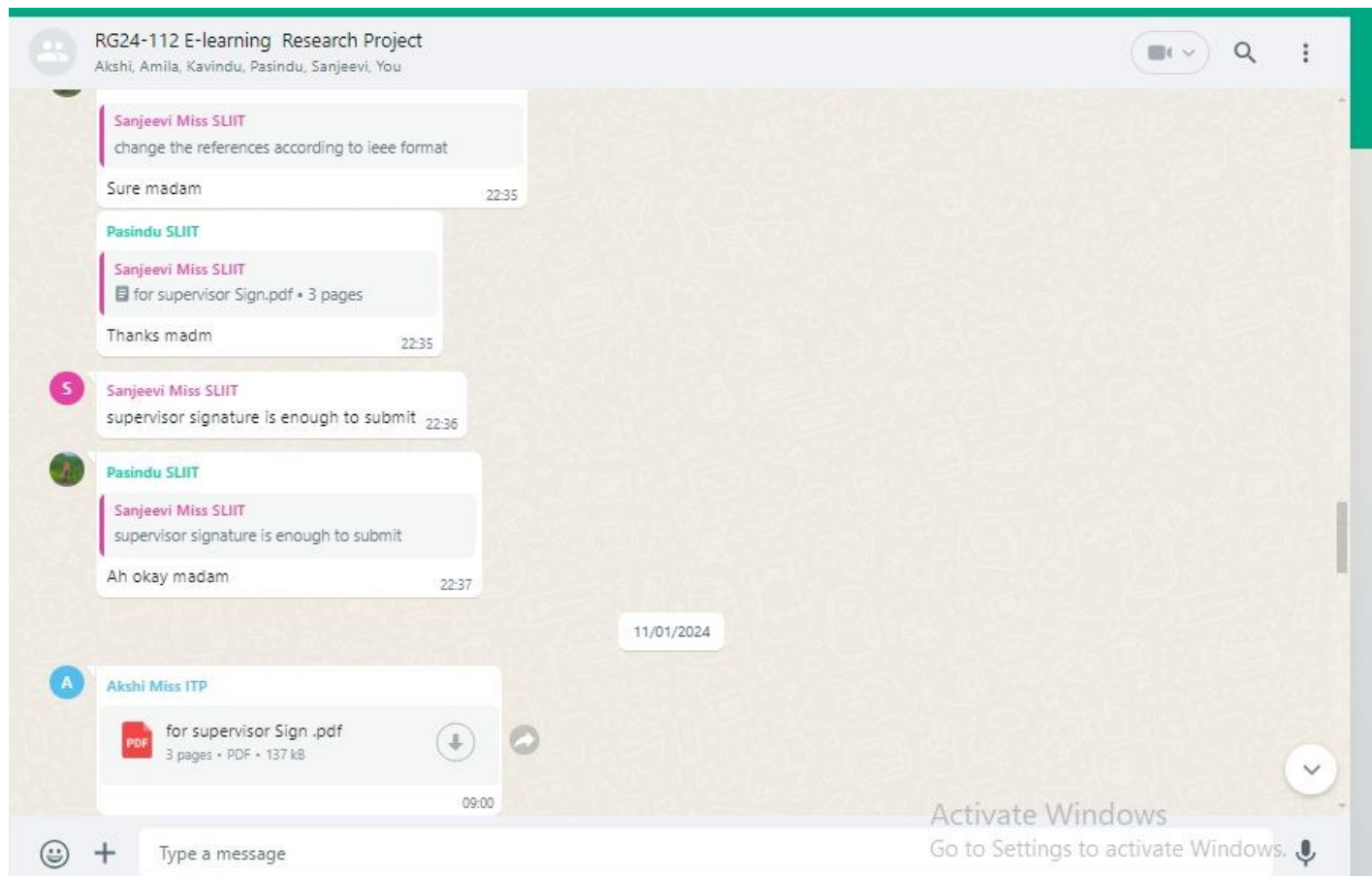


## Proof of Virtual and Physical Meetings









RG24-112 E-learning Research Project

Akshi, Amila, Kavindu, Pasindu, Sanjeevi, You

TAF Document RG24-112.pdf • 15 pages

This is our TAF document PDF

19:31

Sanjeevi Miss SLIIT

When is the deadline

22:16

Midnight,

22:16

Pasindu SLIIT

Before 11th January

22:18

Deadline should be tomorrow midnight

22:18

Pasindu SLIIT

Pasindu SLIIT

Madam there is a CW notice that saying today is the last day. We shoul submit the document before 11th January..

This notice said like that.But not clearly mentioned.

22:19

Sanjeevi Miss SLIIT

change the references according to ieee format

22:35

Sanjeevi Miss SLIIT

for supervisor Sign.pdf

3 pages • PDF • 150 kB

22:35

Type a message

Activate Windows

Go to Settings to activate Windows.

9

Research Meeting

01:00:28

Pop out

Chat

People

Raise

React

View

More

Camera

Mic

Share

Leave

Nishshanka N. ...

Jayasinghe K.A. ...

Nishshanka N. ...

Sanji Chan...

Participants

Type a name

In this meeting (5)

Mute all

Abeykoon R.M.S.P it21021602

Jayasinghe K.A.K.N it21032806

Organizer

Nishshanka N. A. G. A. A it21032...

Nishshanka N. A. P. K. R. it21033...

Sanji Chandrasiri (Guest)

Meeting guest

Activate Windows  
Go to Settings to activate Windows.

OVERALL RESEARCH PROBLEM

- **Lack of Personalization:** E-learning platforms struggle to tailor personalized learning experiences to individual preferences and learning styles.
- **Generic Approaches:** Current systems use content delivery methods that don't maximize user engagement or knowledge retention.
- **Limited Adaptability:** Most platforms can't dynamically adjust to diverse learner needs, creating difficulties in accessing relevant materials.
- **Gap in Literature:** There's a lack of research on developing adaptive machine learning models for customizing learning pathways in online education.

Nishshanka N. A. P. K. R. it21033032

08:45

Pop out

Chat

People

Raise

React

View

More

Camera

Mic

Share

Leave

PowerPoint Slide Show - [Nishshanka PPT (1)] - PowerPoint

# OVERALL SYSTEM DIAGRAM

The diagram illustrates the system architecture. On the left, **Students** and **IT Management Users** interact with the **Frontend Web App**. The frontend includes icons for code editors, a database, PHP, CSS, and Tailwind CSS. This frontend connects via an **API** (represented by a box with green and red arrows) to the **AWS Cloud Hosted Backend**. The backend consists of **Python Flask**, **python scripts**, and **AI/ML** components, all running on a server stack. Below the server, there are two databases: **Main System DB** and **Learning Resources DB**, both represented by cylinder icons with 'SQL' labels.

Nishshanka N. A. P. K. R. it2...

Jayasinghe K.A.K.N it21032...

Nishshanka N. A. G. A. A it2...

Activate Windows