



## **SMART POULTRY FARM IN SRI LANKA USING IOT**

### **Status Document – 01**

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Co-supervisor: Ms. Pipuni Wijesiri

22\_23-J 35

**A.M.S.C.Ananda – IT19958484**

.Sc. (Hons) Degree in Information Technology specialization in  
Information Technology

February 2023

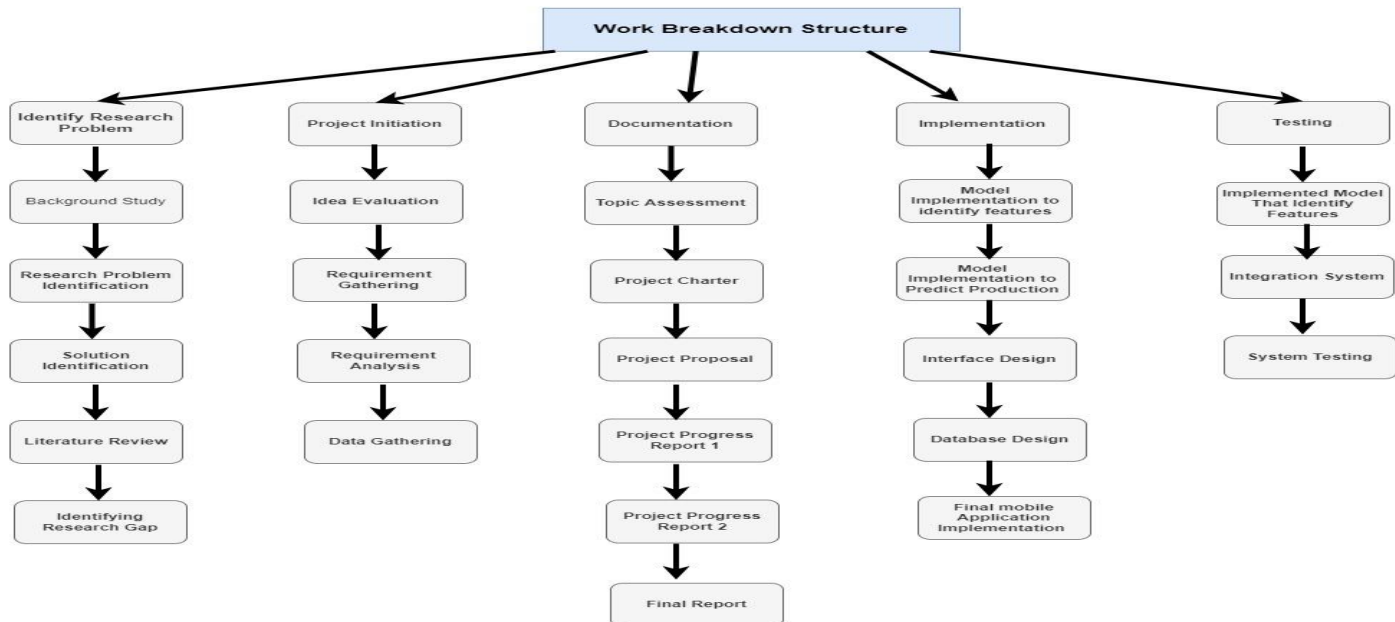
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# 1. Gantt Chart

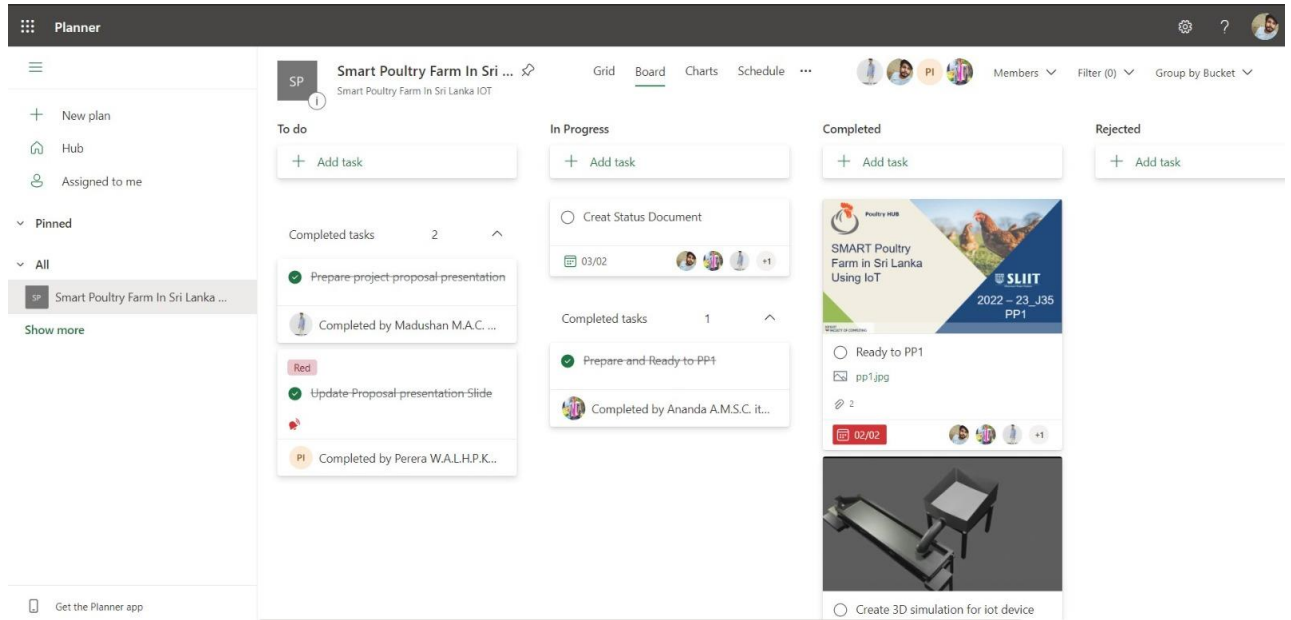


## 2. Work Breakdown Chart



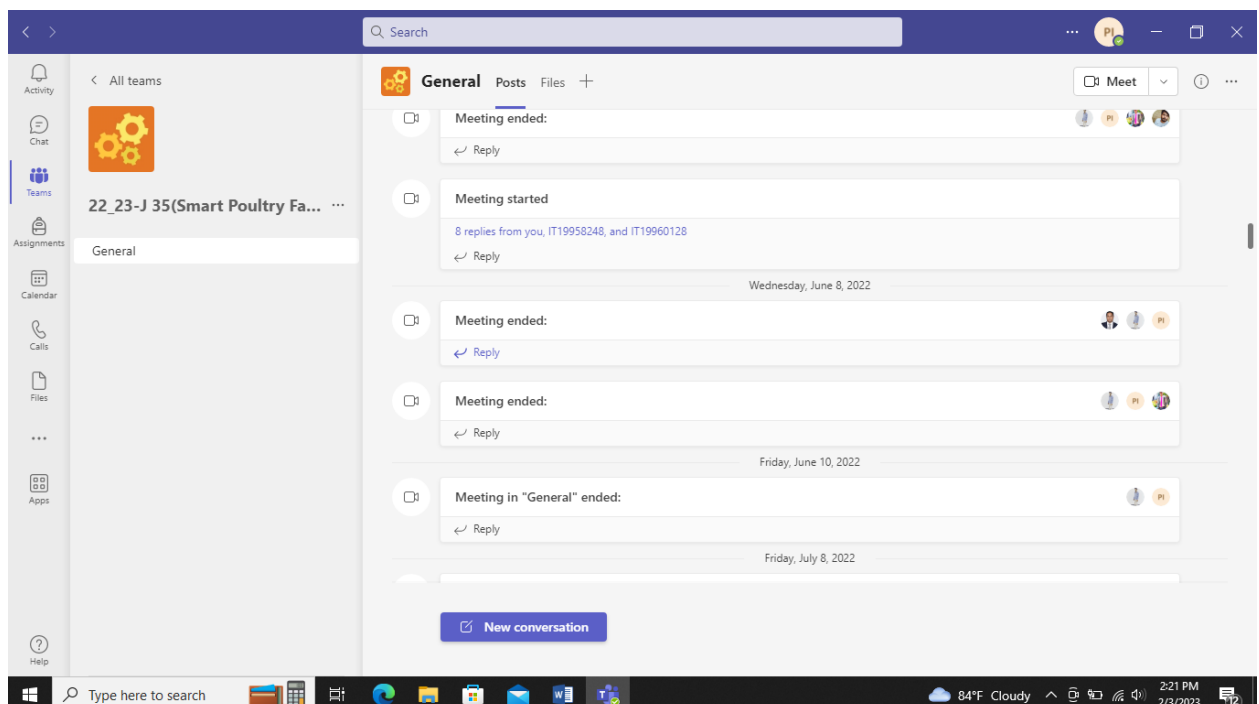
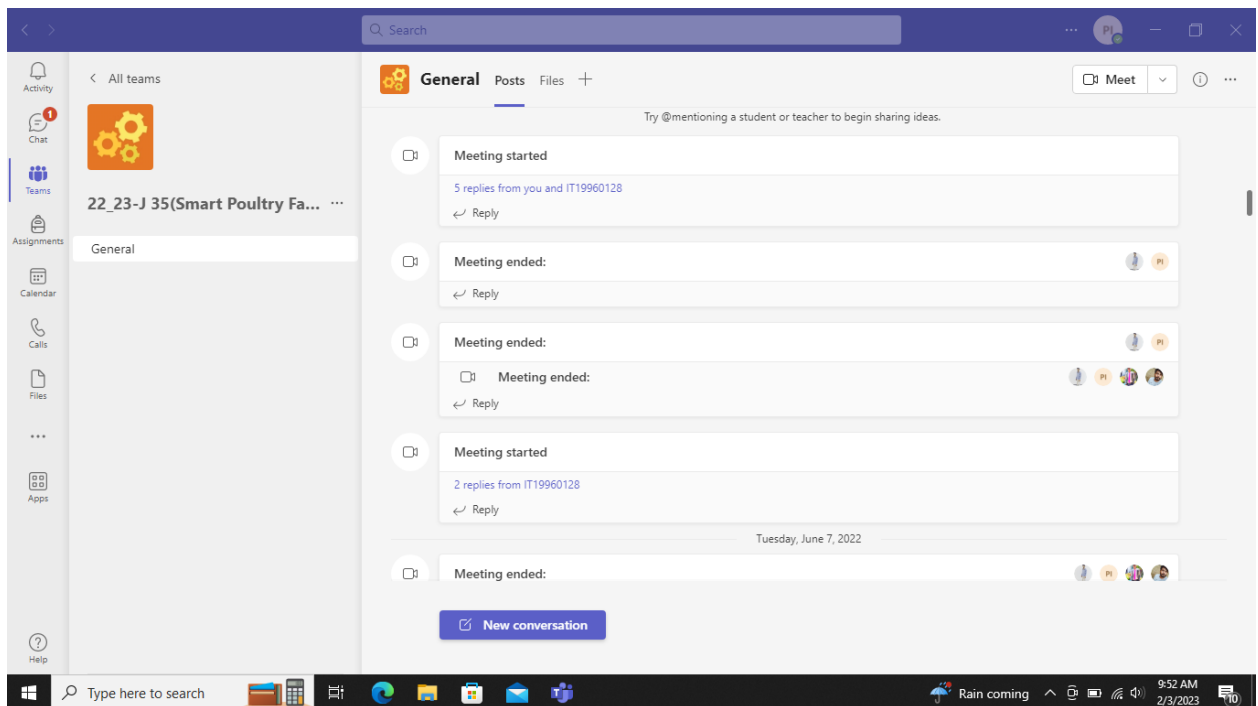
## 3. Project Management Tool

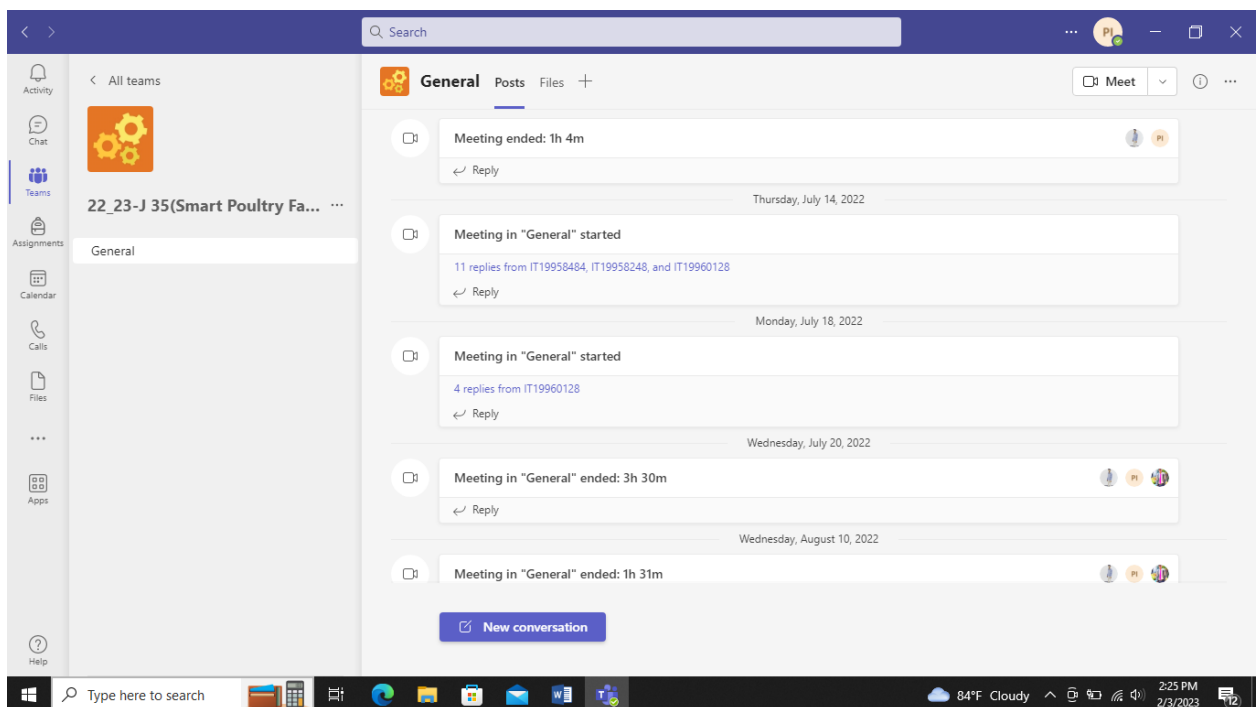
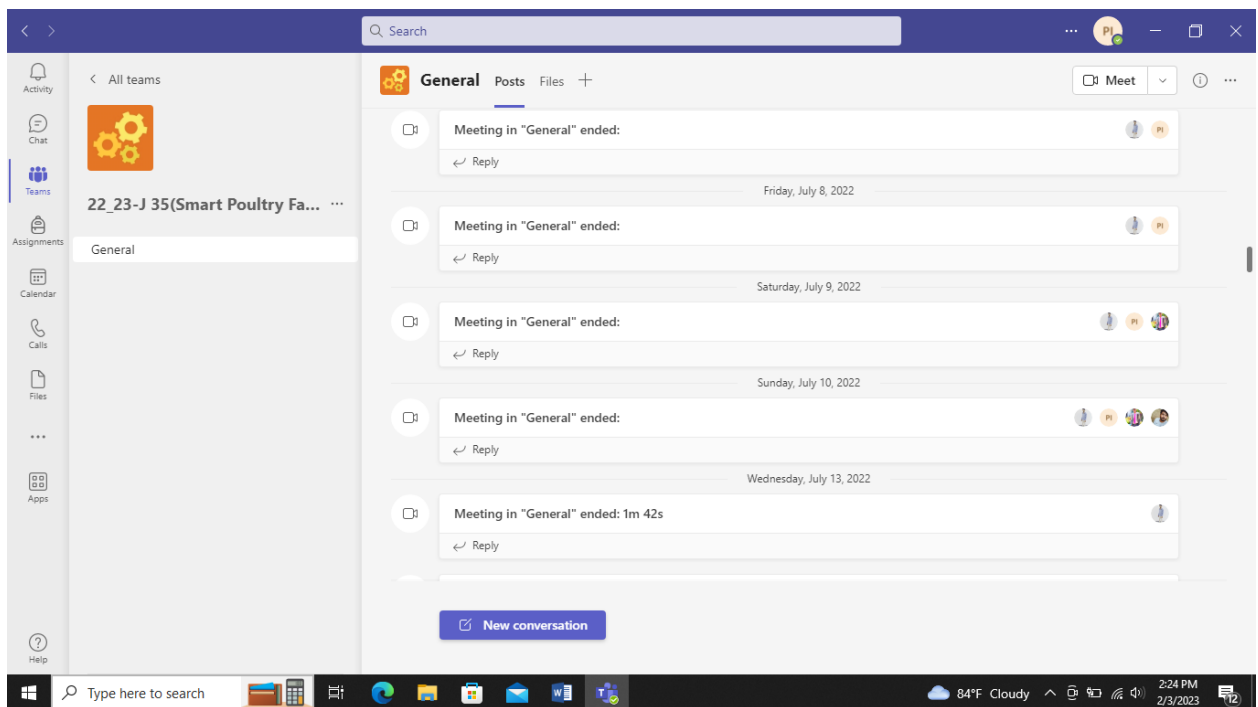
### 3.1 Tasks Allocation

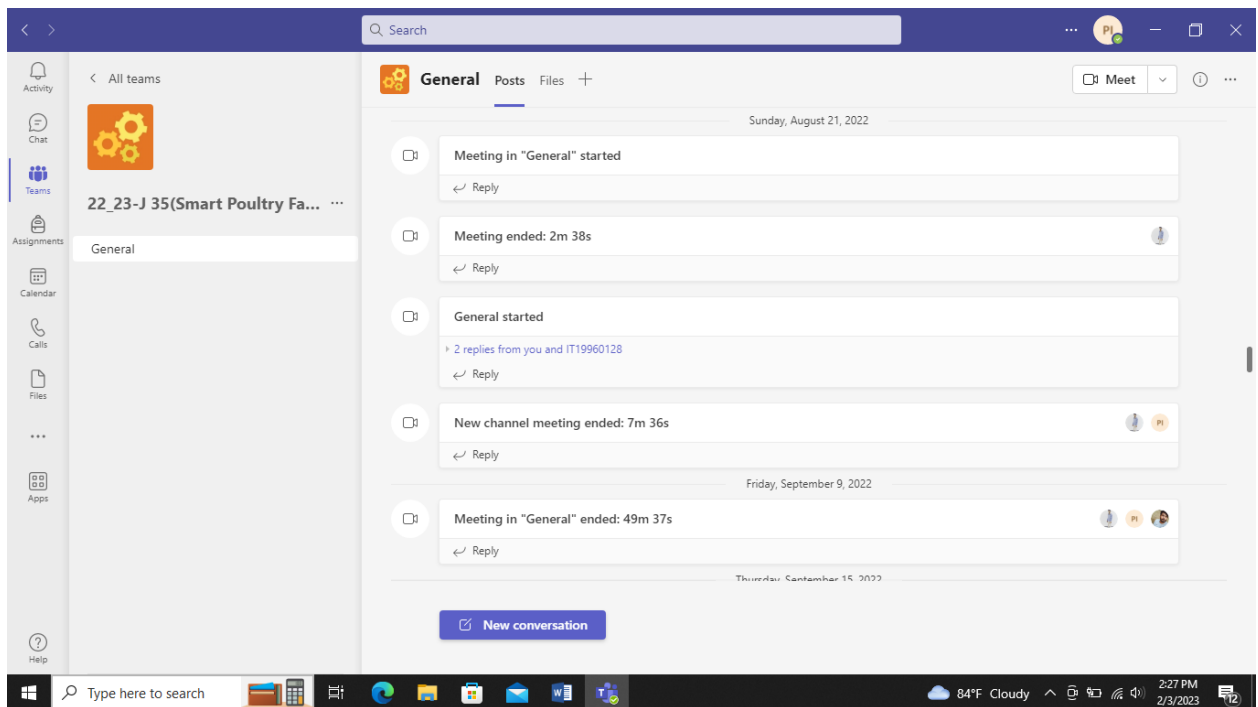
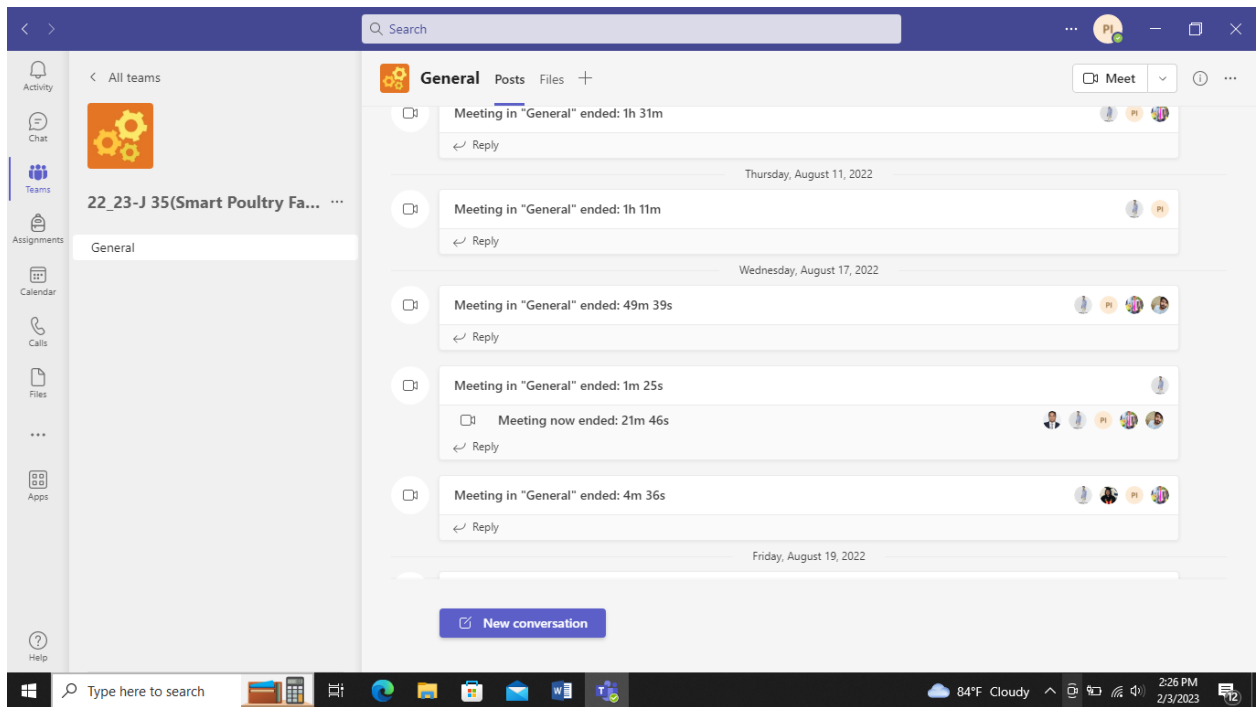


## 4. Supervisor Meeting Evidence

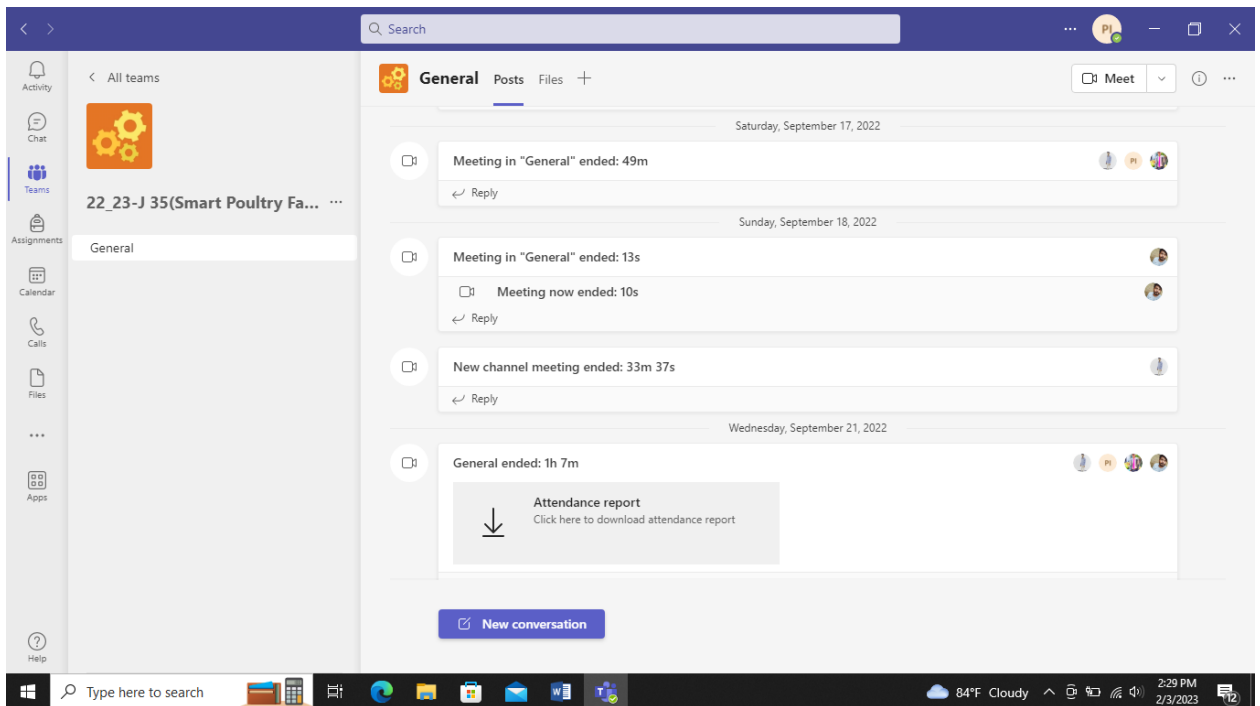
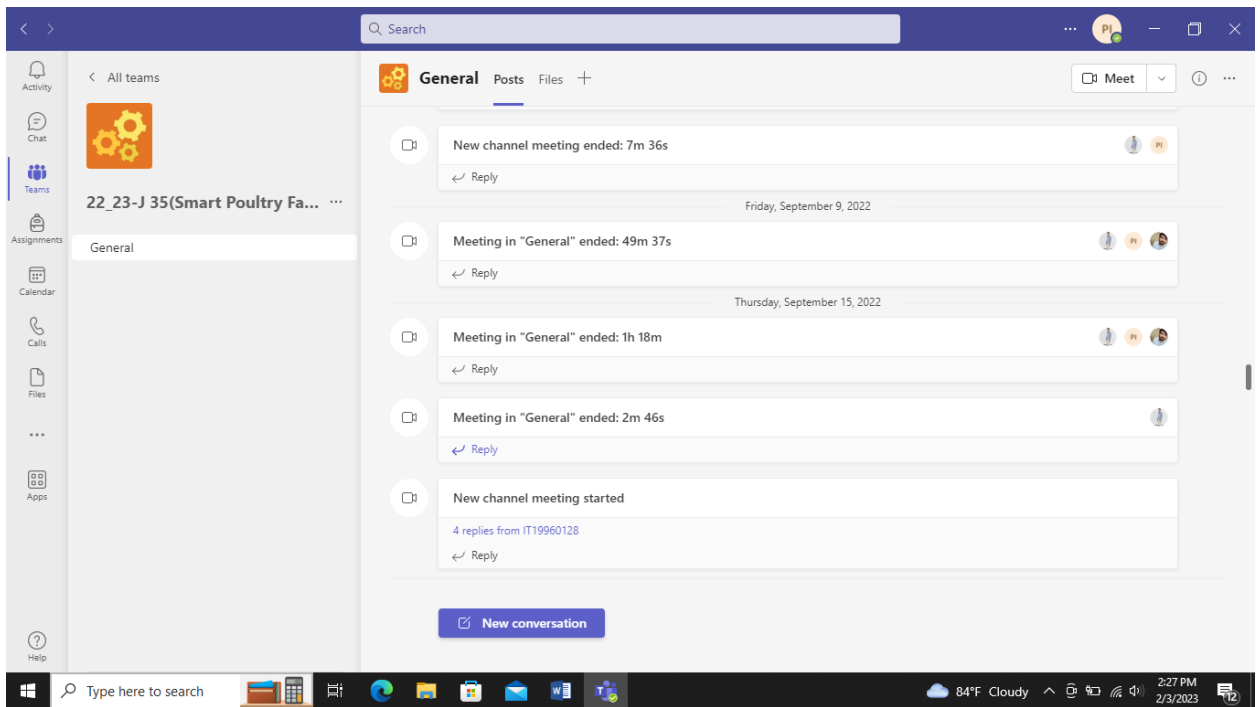
### 4.1 MS Teams chat

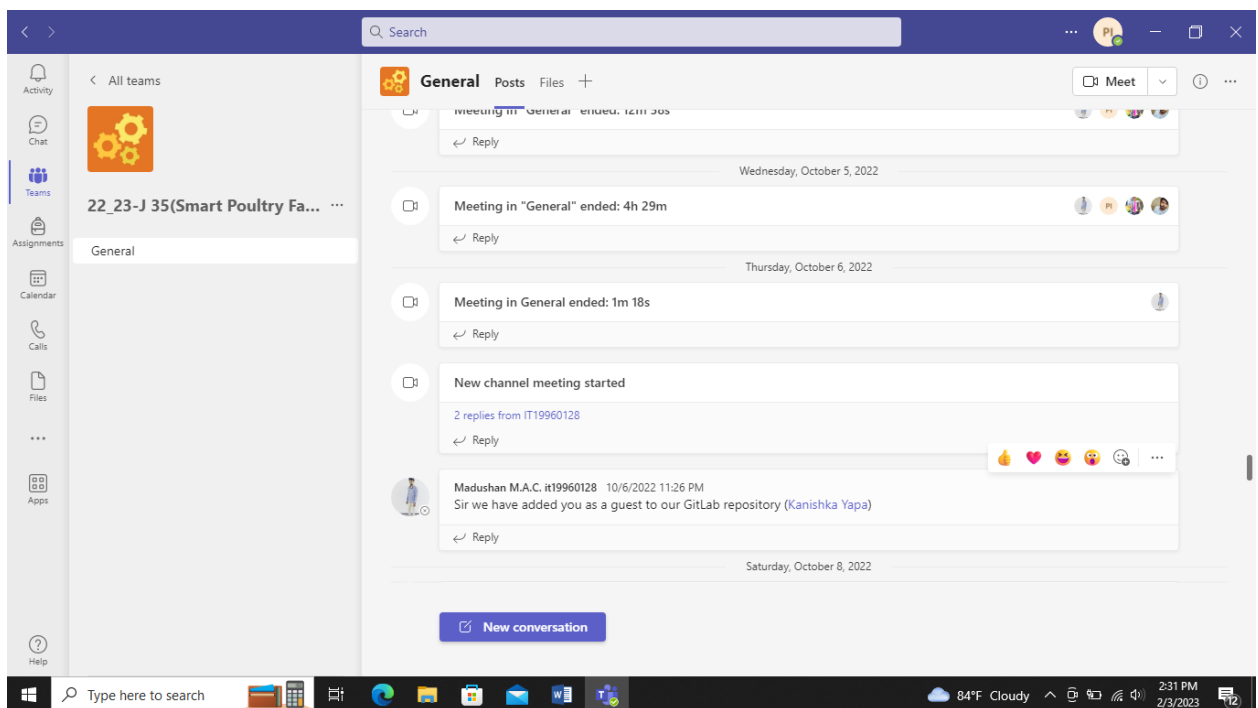
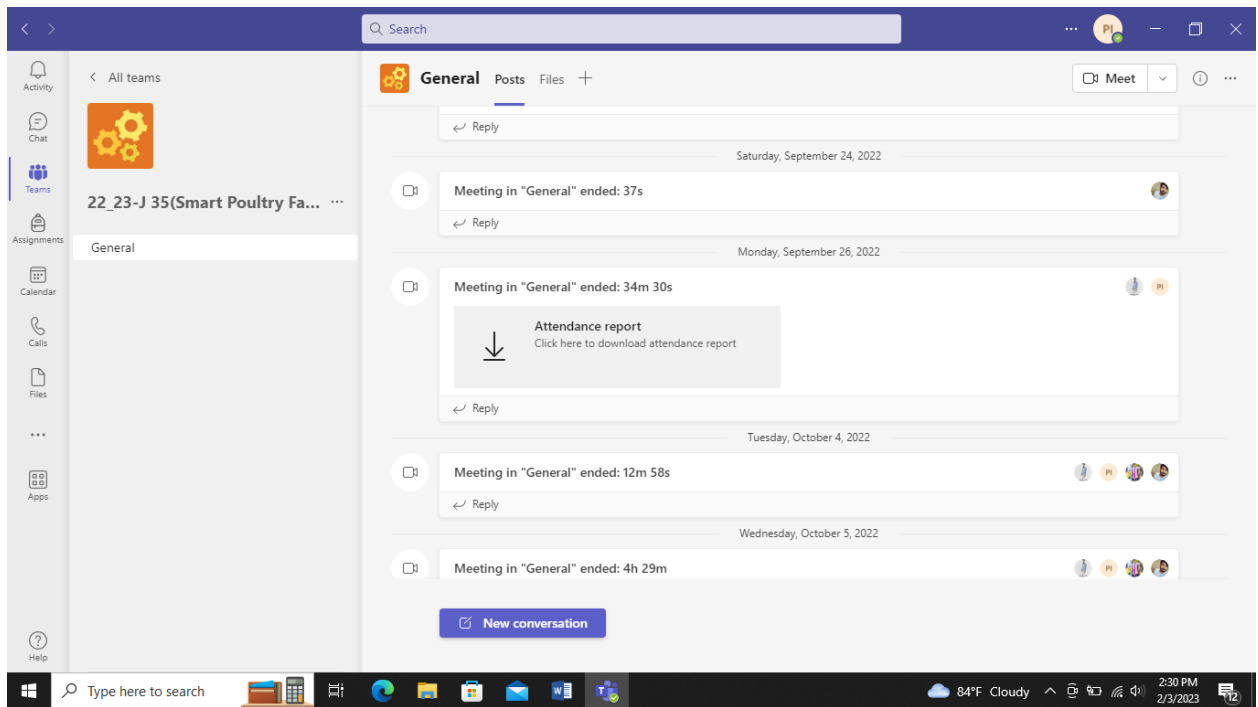


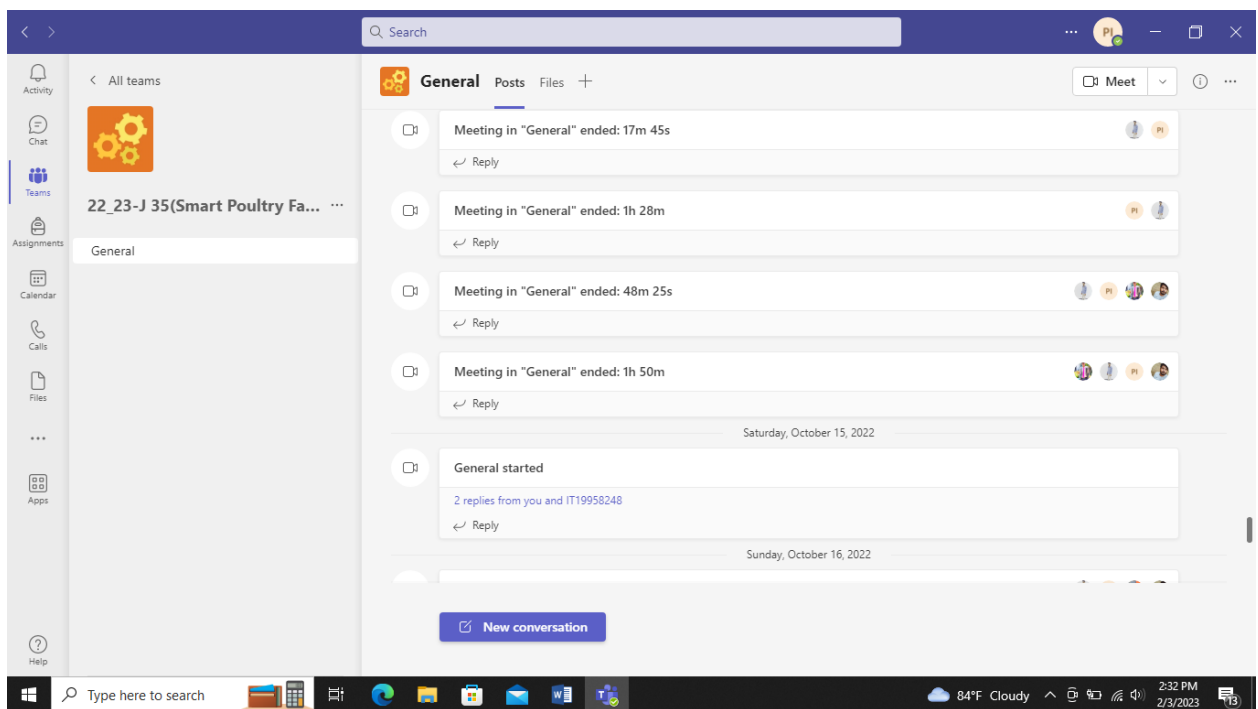
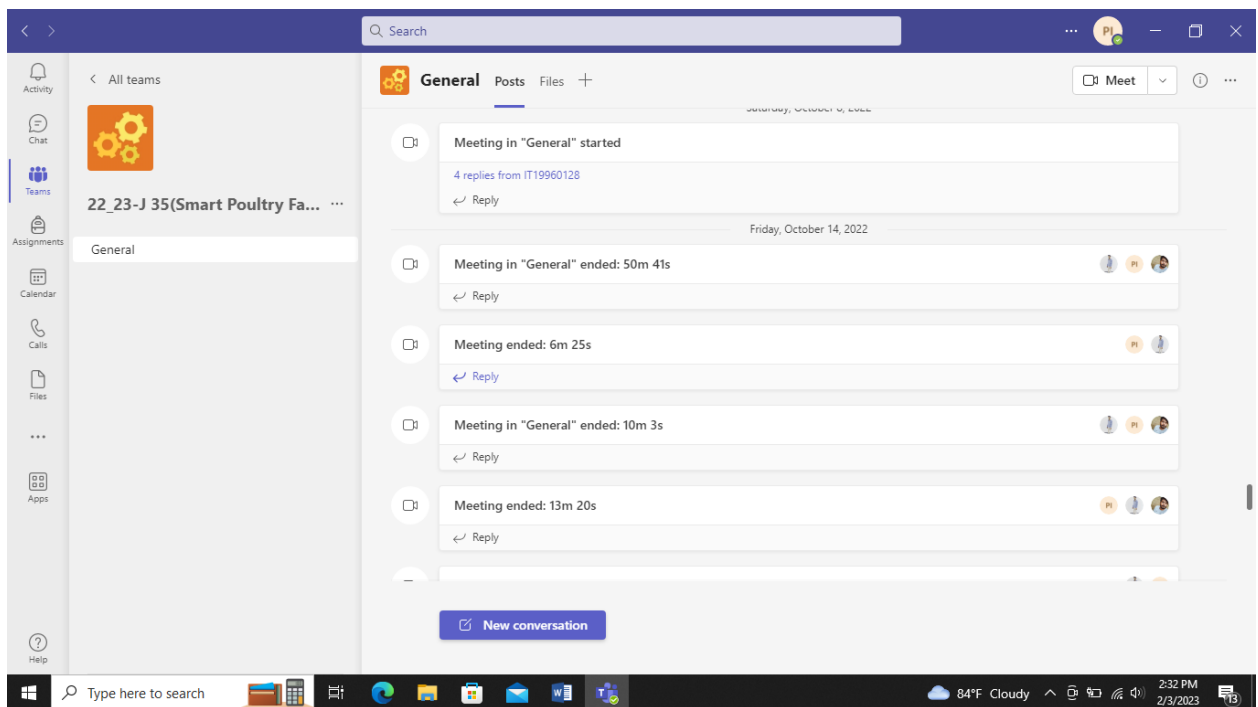












Microsoft Teams interface showing the "General" channel of the "22\_23-J 35(Smart Poultry Fa..." team. The left sidebar includes navigation icons for Activity, Chat, Teams, Assignments, Calendar, Calls, Files, and Apps. The main content area displays a list of posts:

- 2 replies from you and IT19958248  
↩ Reply
- Sunday, October 16, 2022
- Meeting in "General" ended: 13m 44s  
↩ Reply
- Meeting in "General" started  
↩ Reply
- Meeting ended: 1m 11s  
↩ Reply
- Meeting in General ended: 32m 13s  
↩ Reply
- Monday, October 17, 2022
- Meeting in "General" started

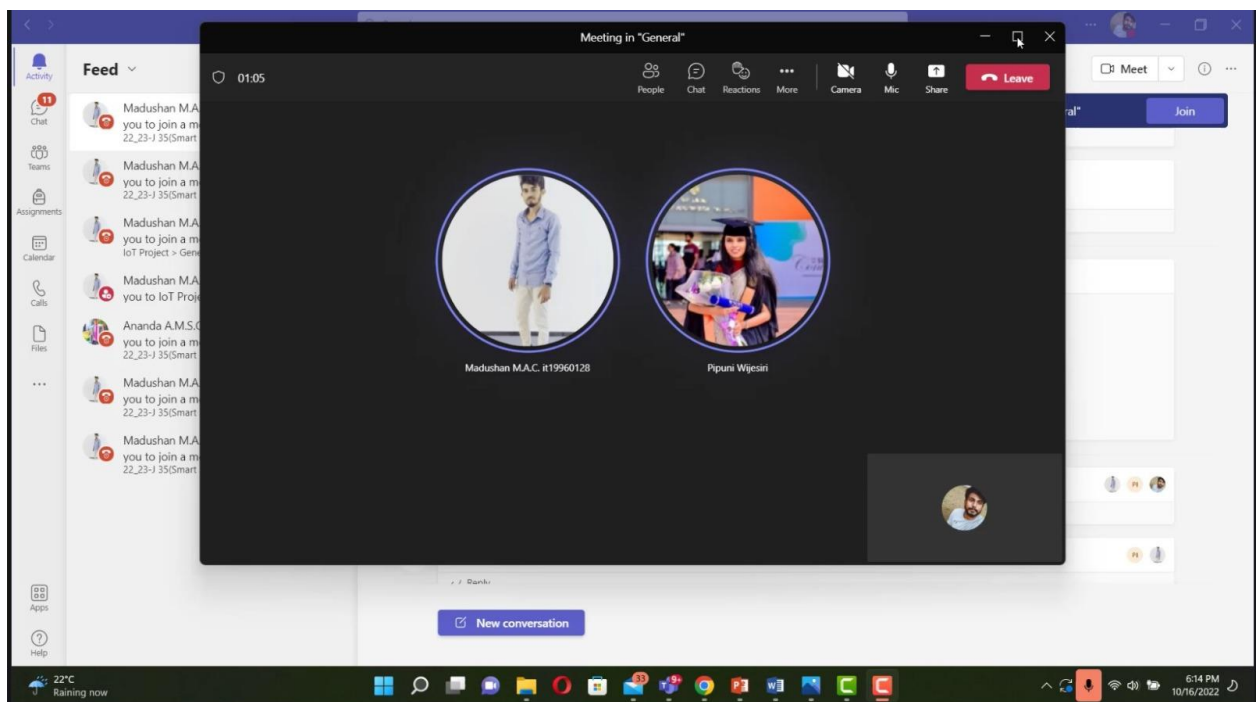
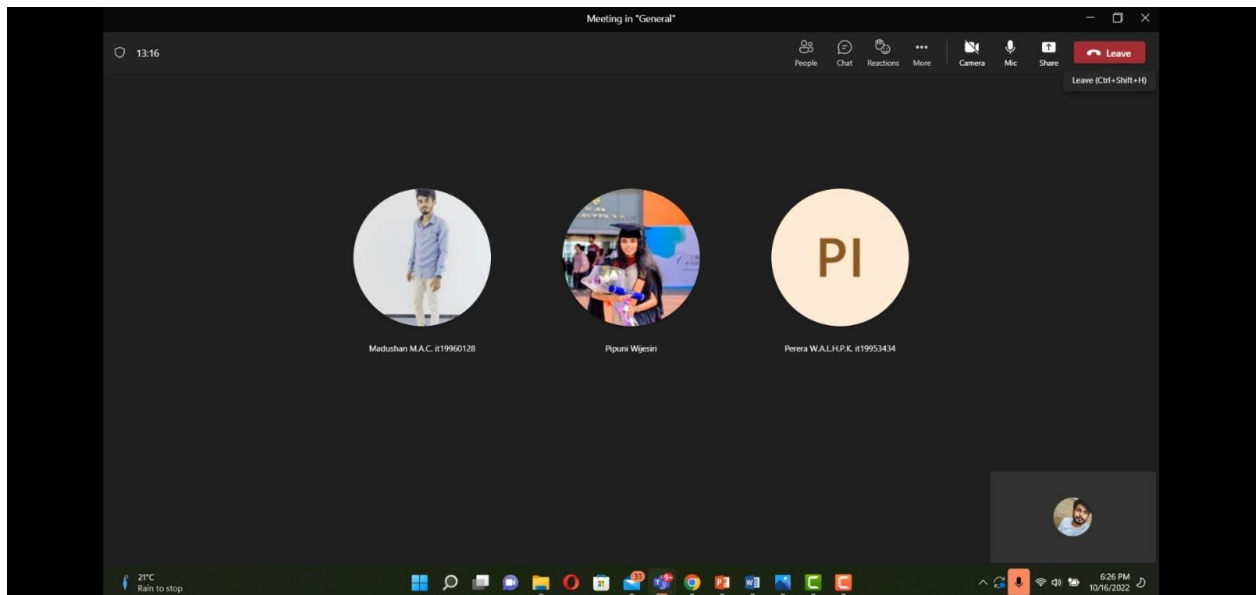
A "New conversation" button is visible at the bottom of the post list.

Microsoft Teams interface showing the "General" channel of the "22\_23-J 35(Smart Poultry Fa..." team. The left sidebar includes navigation icons for Activity, Chat, Teams, Assignments, Calendar, Calls, Files, and Apps. The main content area displays a list of posts:

- Meeting in "General" started  
↩ Reply
- Meeting ended: 1m 11s  
↩ Reply
- Meeting in General ended: 32m 13s  
↩ Reply
- Monday, October 17, 2022
- Meeting in "General" started  
3 replies from IT19958248 and IT19960128  
↩ Reply
- Sunday, November 6, 2022
- Meeting in "General" ended: 45m 34s  
↩ Reply

A "New conversation" button is visible at the bottom of the post list.





RP Meeting - TMP-2022-23-27

23:35

Request control

Pop out

People

Chat

Reactions

Rooms

Apps

More

Camera

Mic

Share

Leave

Microsoft account

Find

Replace

Select

Editing

FILE HOME INSERT DESIGN PAGE LAYOUT REFERENCES MAILINGS REVIEW VIEW DESIGN LAYOUT

Clipboard

Font

Paragraph

Styles

Emphasis

1 Normal

Strong

Title

1 No Spac...

Heading 1

Subtitle

Subtitle Em...

Intense E...

Quote

Intense Q...

WORKLOAD ALLOCATION (extract from the topic assessment form after the correction suggested by the topic assessment panel.)  
(Please provide a brief description about the workload allocation)

MEMBER 1

Madushan M.A.C IT19960128

Designing new robot to collect animal waste and keep their farm cleanly by using robotic technology.

**Novelty for this components**

In past poultry systems doing waste management by workers. Now a days for a large system wastage management is very hard than previously. Every poultry farmers facing this issue. In Present workers not like much to do it because there is some diseases when they are collecting it by their hand so as the solution we are proposed this.

Normally Automatic cleaning tools are already exists, but this robot is particular farm We are going to design algorithm to robot for identify cleaning area (floor width and height) by avoiding animal objects and other objects

As the result we present technique to properly clean the farm and no need to do it by workers and also the robot can turn on, off by using mobile phone application.

MEMBER 2

Ananda A.M.S.C IT19958484

Wijesekara ...

Madushan MA...

Pipuni Wijesiri

Ananda A...

Activate Windows

Settings to activate windows.

Madushan M.A.C. IT19960128

7:16 PM

8/19/2022

Introduction

Specific and Sub Objective

**Specific Objective**

1. To design a robot to collect animal waste and keep their farm cleanly by using robotic technology.

2. To design a mobile application to control the robot.

3. To design a mobile application to control the robot.

35

PI

BW

Special Meeting to discuss about RP

05:36

Request control

Pop out People Chat Reactions Apps More Camera Mic Share Leave

Problems - IoT project - Word

FILE HOME INSERT DESIGN PAGE LAYOUT REFERENCES MAILINGS REVIEW VIEW

Envelopes Labels Start Mail Merge Select Edit Highlight Address Greeting Insert Merge Field Write & Insert Fields Preview Results Find Recipient Check for Errors Finish & Merge

Sub Objective 4: Monitoring and displaying overall status through mobile application.

Task divided among the members

Member 1

Counting animal's quantity and detecting animal deaths, and also checking available animal using image processing.

**Novelty for this components**

Counting detected objects is already exists, but they not identifying death of animals using animal's behavior its actual death or not.

We are going to design new algorithm to identify weather animal death or not. Considering this animal behavior similar to deaths animal behavior and comparing others.

Also situation like an animal behavior same as a death, but still alive that is also detecting as a deaths, so it will be a wrong

Then Avoid this issue we used advanced Sensors with the get detected animals heart beat so that's will be confirmed weather animal is dead or not.

As a Result we present a technique to properly identify Available objects and deaths before entering manually, and also the relevant information gathered and displaying using integrated monitor and also mobile application using AI image processing and the Algorithm.

21°C Cloudy

8:10 PM 8/17/2022

Special Meeting to discuss about RP

04:46

Request control

Pop out People Chat Reactions Apps More Camera Mic Share Leave

Problems - IoT project - Word

FILE HOME INSERT DESIGN PAGE LAYOUT REFERENCES MAILINGS REVIEW VIEW

Envelopes Labels Start Mail Merge Select Edit Highlight Address Greeting Insert Merge Field Write & Insert Fields Preview Results Find Recipient Check for Errors Finish & Merge

Member 4

**Egg retrieval time predictions.**

**The novelty of these components.**

Development of a new algorithm by adding new parameters such as time and egg size taking into account the system operating parameters to more accurately predict egg retrieval time and avoid delay in egg retrieval.

Chickens not getting proper nutrition, certain diseases, time taken to lay eggs.

The system works with a newly developed algorithm that can provide data factors such as the time it takes chickens to lay eggs compared to existing systems. It gives the farmer a more accurate prediction of when eggs will be laid from the chickens in the next season.

**Technologies to be used:**

Python

Arduino

Image processing

Machine Learning

Activate Windows Go to Settings to activate Windows.

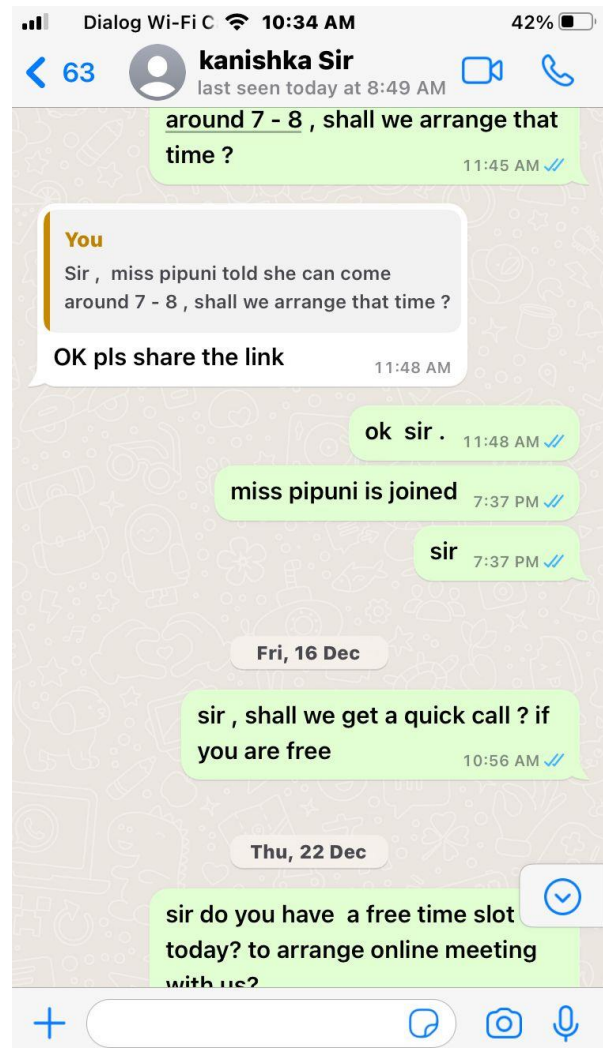
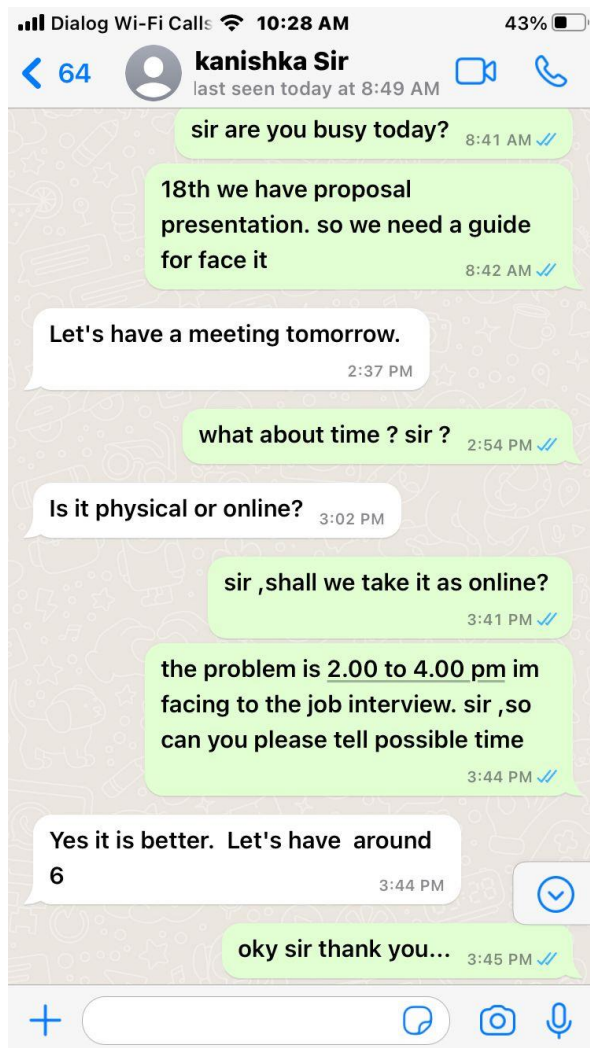
Madushan M.A.C. R19960128

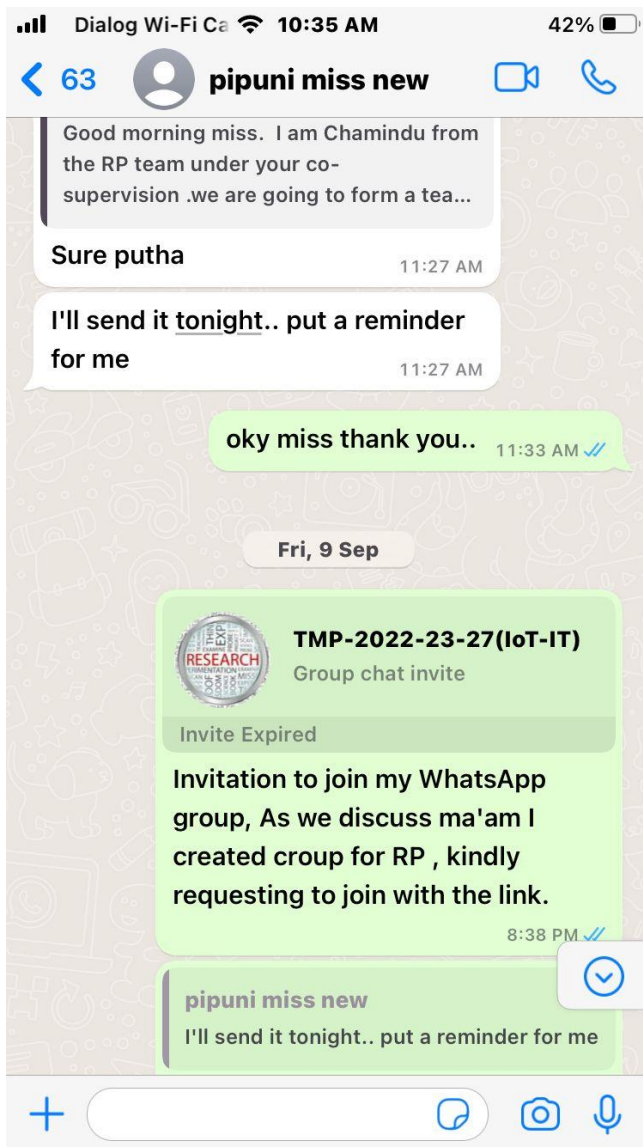
Type here to search

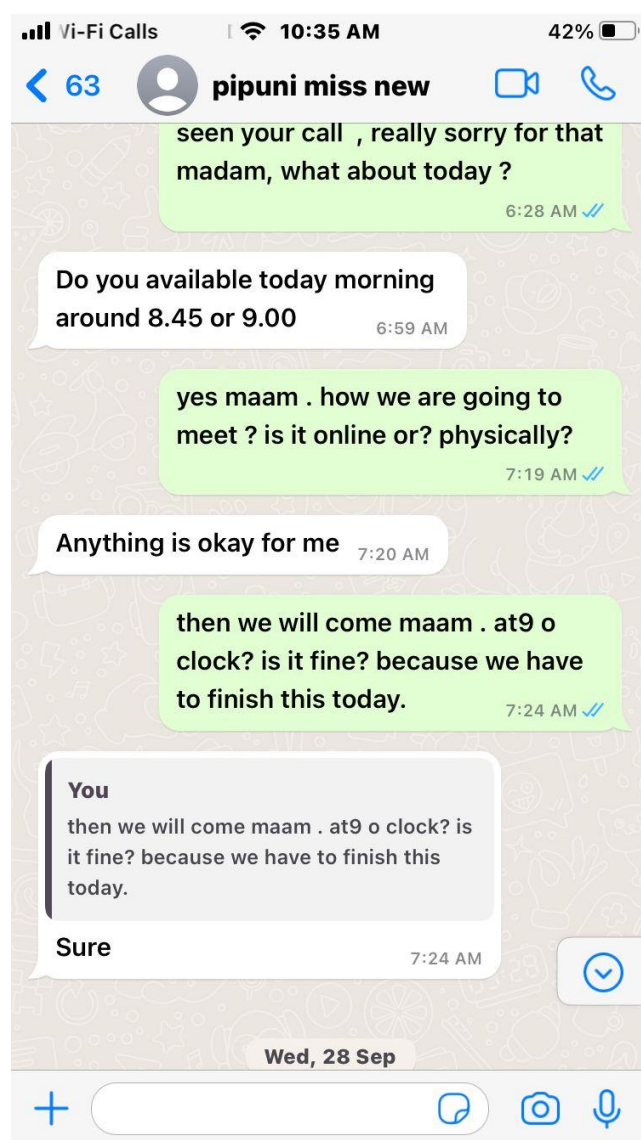
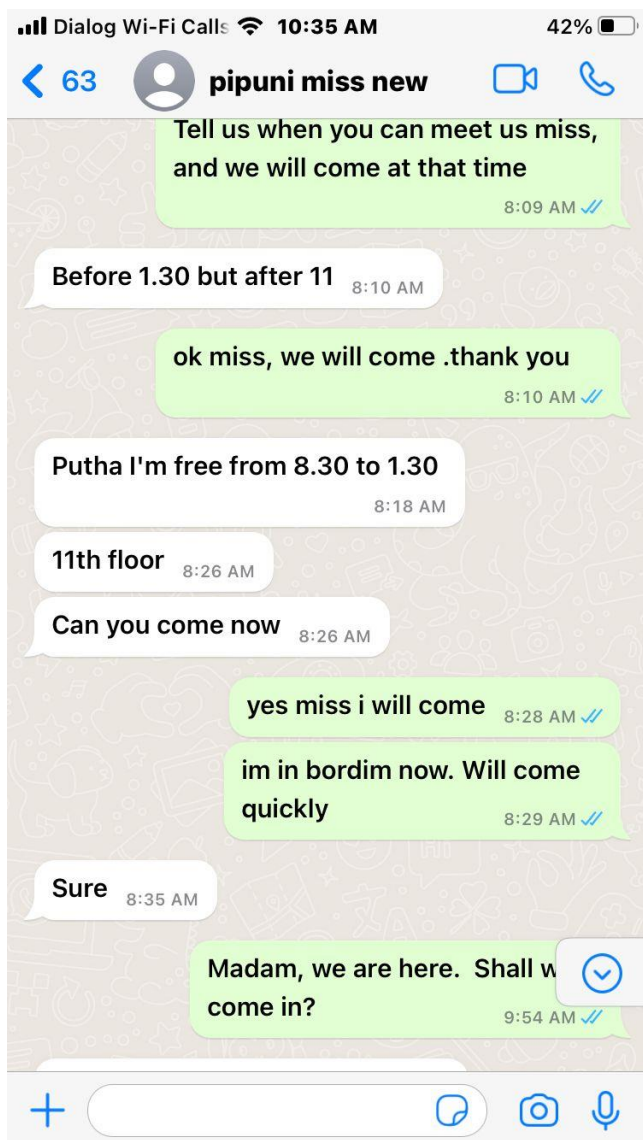
Afternoon rain 1:02 PM 03-Feb-23

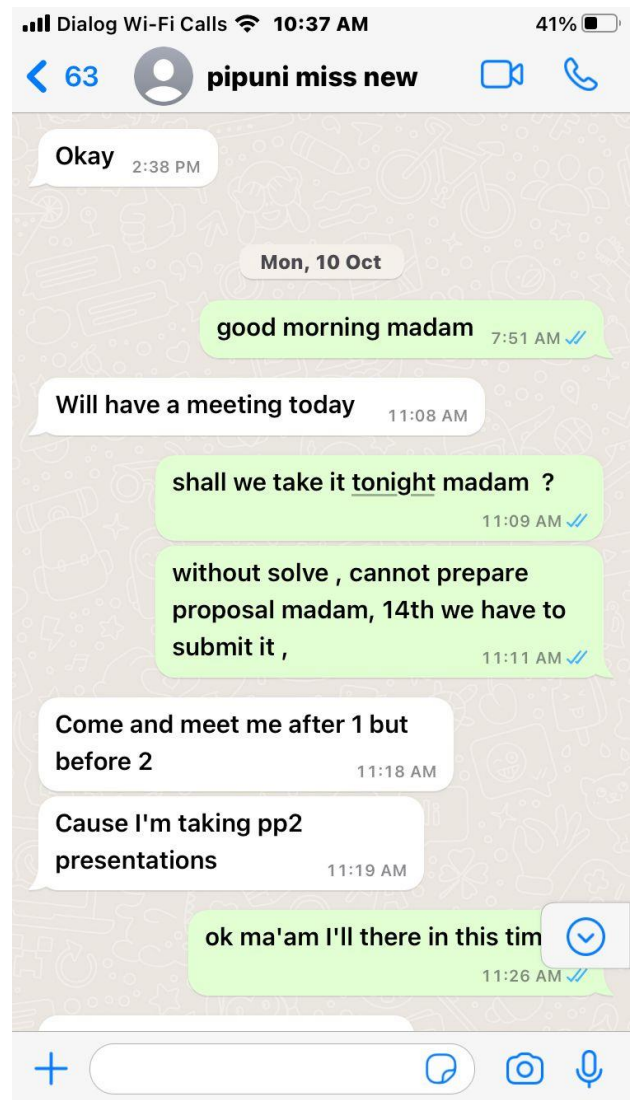


## 4.2 WhatsApp Chat

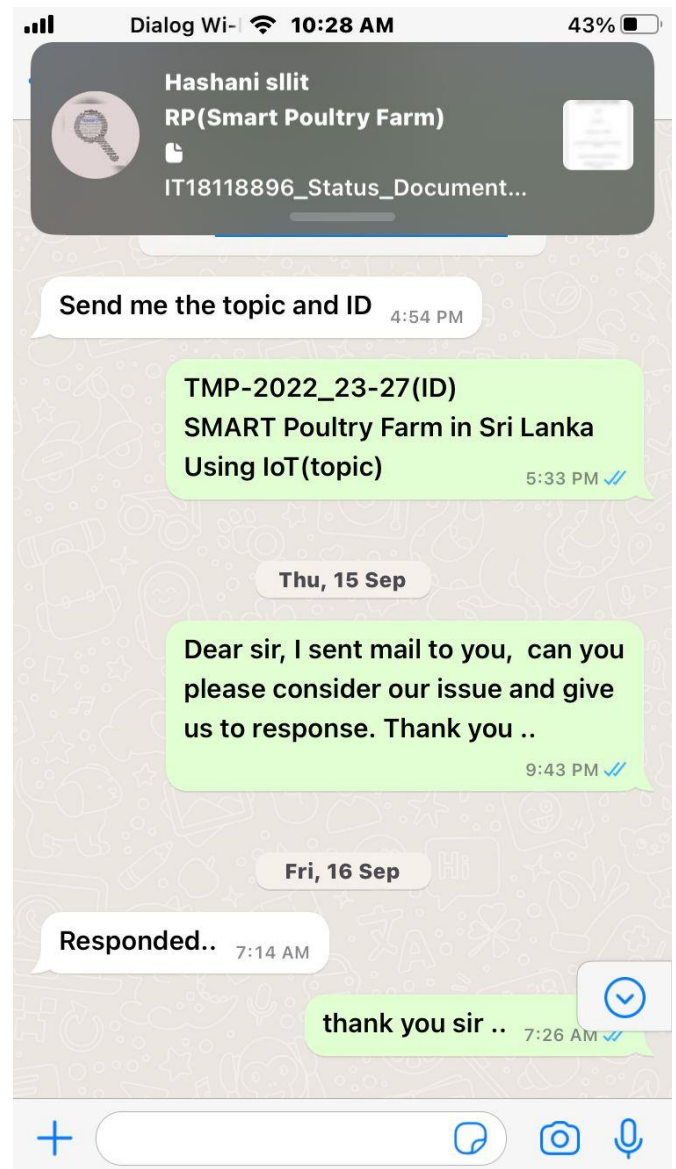
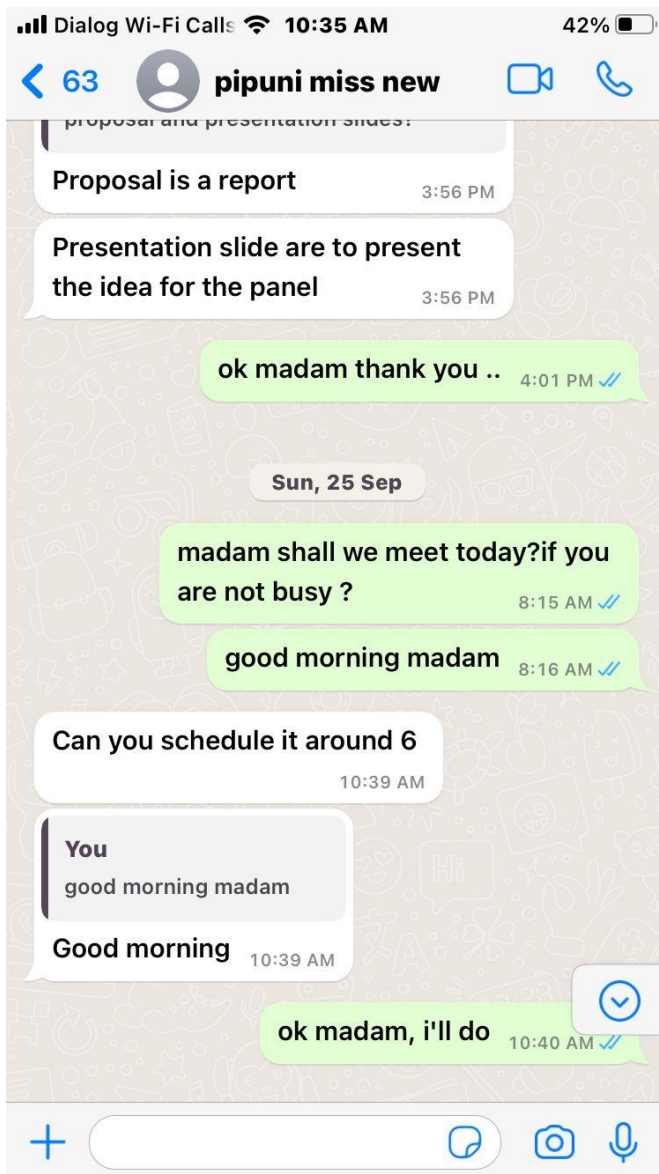












## 5. Individual Project Logs

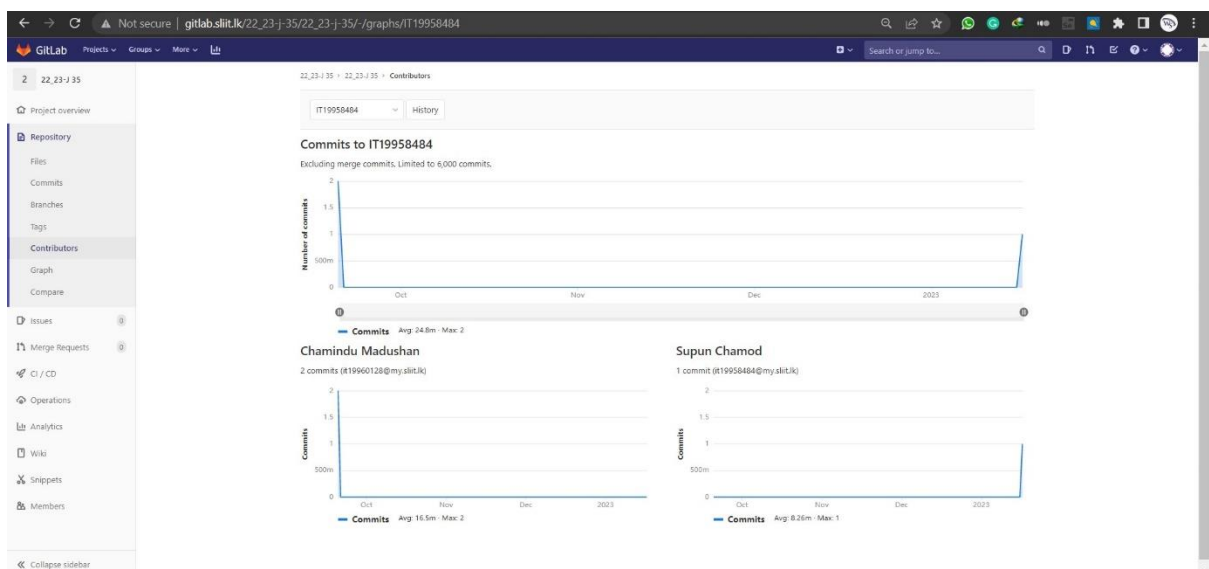
### 5.1 Commits

The screenshot shows the GitLab interface for a repository named '22\_23-J 35'. The left sidebar contains navigation links: Project overview, Repository (selected), Files, Commits, Branches, Tags, Contributors, Graph, and Compare. The main content area shows the repository details, including a recent push by 'IT19958484' 5 minutes ago. Below this, there is a table of files and their commit history:

Name	Last commit	Last update
IOT_p2_TEST.ino	Egg collector Microcontroller Code	5 minutes ago
README.md	Update README.md	3 months ago

Below the table, the 'README.md' file content is displayed, showing the project title '22\_23-J 35' and a description: 'Main objective - Giving an Automated solution for the common issues faced by farmers who use poultry farms to improve the quality of products and service using IoT based technologies. Main Research questions -'.

### 5.2 Contributions



## 5.3 Progress

