GNG 1103 Project Deliverable G: Prototype II and Customer Feedback

Submitted To:

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Submitted By:

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Objective

For teams to display forward progress of the second prototype and plan out steps forward are the last few prototypes. A breakdown of feedback given from this past week's client meeting should also be present.

Client Feedback

In the last week there have been several progressions due to client interactions. Our initial plan was to design our own lasers as well as piggyback off of the lasers that Mill Street had in place but it has been clarified that those lasers currently on the process lines are incapable of counting cans at the moment. This means that that part of the plan is completely scrapped and the whole system is now reliant on our laser tripwire. Later this past week we gave our pitch presentation. The presentation was received well and we received no urgent feedback or questions from the client. We were able to ask questions and received clarification on the accuracy threshold of the system and what the flagging percent should be for the errors. If the productionion line is anywhere below 5% of the theoretical data, the system will now flag the number. All in all, we are now able to move forward and continue prototyping to iron out the kinks in our numbers and fully set up the data collection system.

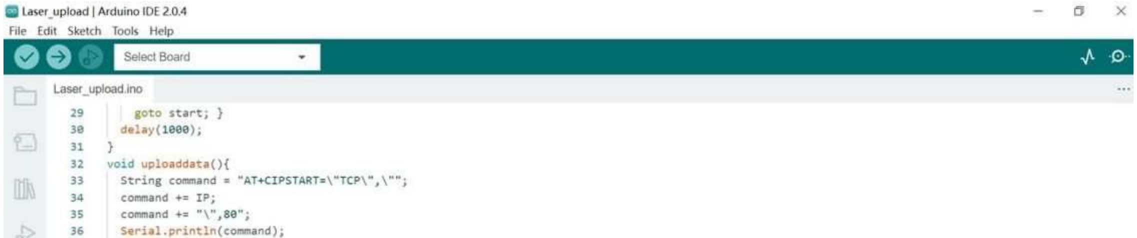
Prototype Breakdown

This week's prototype was broken into two sections. Due to the fact that we were still waiting for parts to be delivered this week, we worked on code and on the math behind the code. We looked into Thingspeak and began the process of uploading and formatting data, to better determine how to use the platform.

Updated Excel sheet with math for rates

https://uottawa-my.sharepoint.com/personal/khami024_uottawa_ca/_layouts/15/guestaccess.aspx?guestaccesstoken=WskhVFR22Z2UNQlXFP7uri2zQBvUxuRiE39dQi0rgy0%3D&docid=2_0676dae1de5564d65bb80b6b144abb583&rev=1&e=8B17Lq

Screenshots of Current Arduino Code for Tripwire



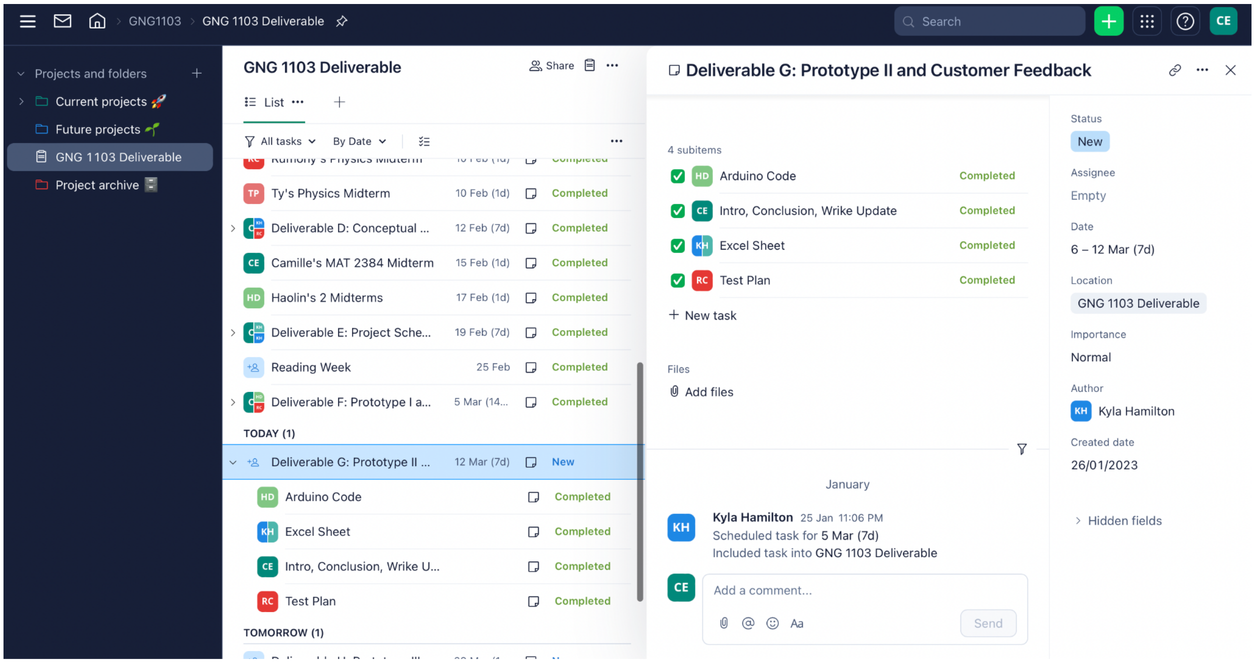
```
    goto start; }
  delay(1000);
}
void uploaddata(){
  String command = "AT+CIPSTART=\"TCP\",\"";
  command += IP;
  command += "\",80";
  Serial.println(command);
```

Updated Prototyping Test Plan

Test ID			
2	To determine at what laser sensor can function without lowering functionality	Begin at a distance of 1 can; break the laser with hand note results repeat process until the code stops working properly	To find the max distance the laser can function without inaccurate data. This will help keep the results of future tests more controlled
3	To determine the cans per minute being pushed through the lasers	Push soda cans through laser and calculate a cpm rate manually	To make sure the cpm rate found manually is equivalent to the cpm tracked via cpu
4-5	To determine if the data real-time data is the same as the data being stored on the cloud	Have cans break the laser and manually note down the values. After a few attempts cross-examine the values written to the values on the cloud	To make sure the data transfer system is functioning properly (this test is the same test as above just using different speed to ensure the results are consistent

Wrike summary

Below are screenshots of an updated Wrike task board that includes changes made in estimated task duration, completed tasks/ responsibilities, additional dependencies, and tasks assignees etc.



GNG 1103 Deliverable

Ty's Physics Midterm	10 Feb (1d)	Completed
Deliverable D: Conceptual ...	12 Feb (7d)	Completed
Camille's MAT 2384 Midterm	15 Feb (1d)	Completed
Haolin's 2 Midterms	17 Feb (1d)	Completed
Deliverable E: Project Sche...	19 Feb (7d)	Completed
Reading Week	25 Feb	Completed
Deliverable F: Prototype I a...	5 Mar (14...	Completed

TODAY (1)

Deliverable G: Prototype II ...	12 Mar (7d)	New
Arduino Code		Completed
Excel Sheet		Completed
Intro, Conclusion, Wrike U...		Completed
Test Plan		Completed

TOMORROW (1)

Deliverable G: Prototype II and Customer Feedback

4 subitems

☑ Arduino Code	Completed
☑ Intro, Conclusion, Wrike Update	Completed
☑ Excel Sheet	Completed
☑ Test Plan	Completed

+ New task

Files

Add files

January

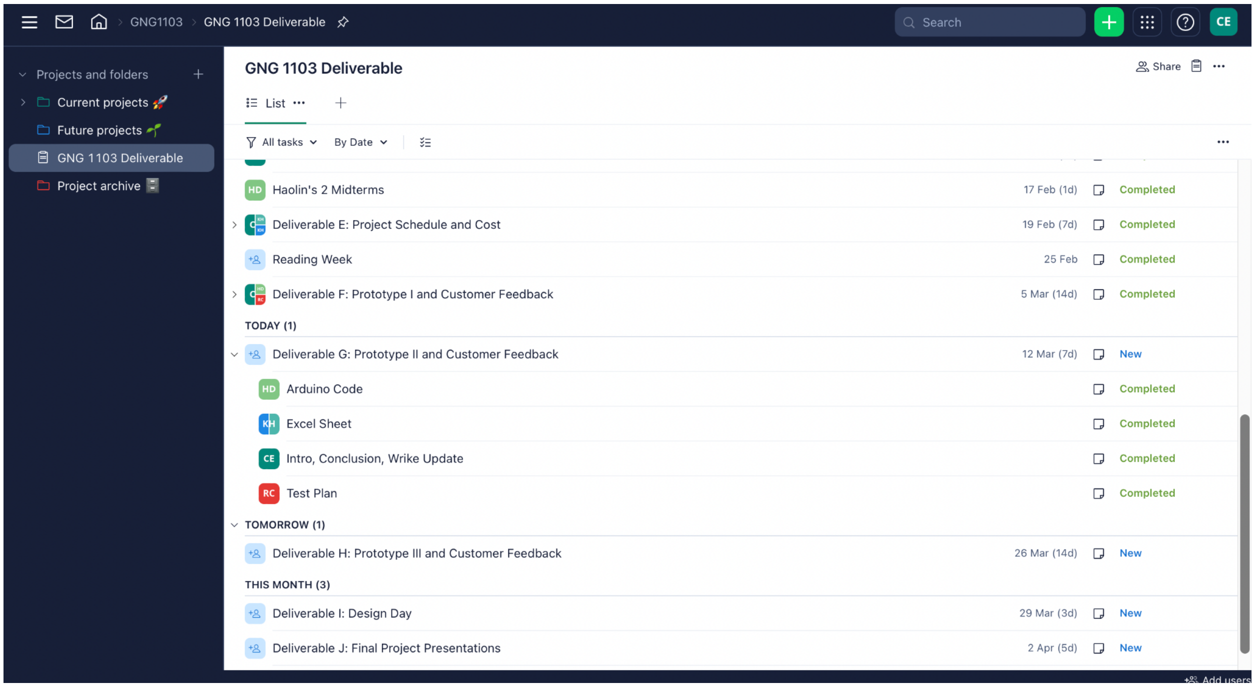
Kyla Hamilton 25 Jan 11:06 PM
Scheduled task for 5 Mar (7d)
Included task into GNG 1103 Deliverable

Add a comment...

Send

Status: New
Assignee: Empty
Date: 6 – 12 Mar (7d)
Location: GNG 1103 Deliverable
Importance: Normal
Author: Kyla Hamilton
Created date: 26/01/2023

Hidden fields



GNG 1103 Deliverable

Haolin's 2 Midterms	17 Feb (1d)	Completed
Deliverable E: Project Schedule and Cost	19 Feb (7d)	Completed
Reading Week	25 Feb	Completed
Deliverable F: Prototype I and Customer Feedback	5 Mar (14d)	Completed

TODAY (1)

Deliverable G: Prototype II and Customer Feedback	12 Mar (7d)	New
Arduino Code		Completed
Excel Sheet		Completed
Intro, Conclusion, Wrike Update		Completed
Test Plan		Completed

TOMORROW (1)

Deliverable H: Prototype III and Customer Feedback	26 Mar (14d)	New

THIS MONTH (3)

Deliverable I: Design Day	29 Mar (3d)	New
Deliverable J: Final Project Presentations	2 Apr (5d)	New

Conclusion

In conclusion, the team has developed an analytical, numerical, and experimental model following the pitch presentation. Future design choices will be facilitated with the provided clarification/ data received from the client. Key components, calculations, materials etc. have been defined. The continued use of a planning/ scheduling software ie. Wrike serves beneficial in keeping project progress on schedule whilst displaying project goals, objectives, and milestones. The group continues to utilize efficient planning in all project procedures for intelligent resource/ time allocation decisions and to better identify smaller yet targeted project objectives with specific tests and/or measurable results.