PROJECT LOGBOOK

Student Name :
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Lecture Name :
Prof. Dr. Judhi Prasetyo

Course :
PDE 4432

Project Name :
Smart Watering system + Garden Management

Date :
November - December 2024

Project Plan and timeline
Written on 12 Nov

Week 1 - 11 to 16 Nov
Research and finalization of scope of work

* Research about what plants need to survive and grow + about UAE weather conditions

* Understand current system and challenges

* Start with checking parts in Arduino Starter Kit and build basic system

Week 2 - 18 to 23 Nov
System design and purchasing component

* finalize proper system design and wiring document on TinkerCad

* Purchase required parts on Amazon and test them

* Start building code and checking components.

Week 3 - 25 to 30 Nov

* Finish bug fixing and clear all issues.

* Test demo project to make sure everything is all good

* Start writing introduction of topic, Challenges and system design in paper.

Week 4 - 2 to 7 Dec
Work on paper and presentation
* Finish at least 3 pages of paper → Research of plants + UAE weather + system design

* Start with preparing presentation slides

* Test and practice with demo projects

Week 5 - 9 to 14 Dec
* Finish presentation

* Finish last 3 pages of paper → writing about components of demo and future implementation

Week 6 - 16 to 18 Dec
* Finish re-reading paper and checking it

* Finish uploading code on GitHub

* Finish recording demo project

* * * 18 Dec - Upload submission

Log Book Report

Week 1

12 Nov

* First idea - Robot chassis
Controlling movement of Robot - Ultrasonic sensor - remote control

Feedback: Professor said no as it is too basic and doesn't have any objective or problem to solve.

* Second idea - Smart home garden system
- Soil moisture to check water in soil → turn on water pump
- Photoresistor to check sunlight → turn on servo motor
- Water level to check water tank → turn on LED light

Feedback: professor said ok

13 Nov

Started building demo project to begin with idea and understand components.

15 Nov

finalize system design with below components
Water level sensor - LED - Photoresistor - Mini servo motor - LCD - relay.

Missing parts : soil maisture sensor - water pump - battery case
↳ Placed order on Amazon

Week 2

19 Nov

Created proper wiring document on TinkerCad

Used component available in TinkerCeed and then edited the rest by adding it manually to picture

Parts ordered from Amazon got delivered

20 Nov

Soldered relay, battery case and water pump

finishing wiring everything to breadboard and Arduino Uno

Finishing code and testing all the aspects

Week 3

26 Nov

Facing issue with unusual characters coming on serial monitor and LCD

Issue solved by replacing Arduino Uno - did wiring all again from beginning

Testing demo project for checking on any issues

27 Nov

Started writing about research on UAE + plants

Finished 1 page of paper

Week 4

2 Dec

finished writing about current system and challenges

finished 1 more page → Total pages done = 2

3 Dec

Started writing about components of demo project

Finished 1 more page → Total pages done = 3

4 Dec

Started designing presentation slides

Finished writing about components of demo project - 2 more pages done → Total pages done = 5

Week 5

10 Dec

finished presentation slides

11 Dec

My presentation completed in class

14 Dec

Checked code and tested again the demo project

Uploaded code on Github.

Week 6 - 17 Dec.

Finished writing introduction, conclusion and abstract
Checked everything and finish submission.