

IM3080 Design and Innovation Project (AY2022/23 Semester 1)

Individual Report

Name: Lee Wei Jie

Group No: 7

Project Title: Flowerescent

Contributions to the Project (1 page)

1. did research on audio sound
2. did research on PCM library for playing audio in Arduino
3. did research on UART MP3 player module
4. conducted experiment in different sensors (ultrasonic sensor, motion sensor, pressure sensor)
5. conducted experiment in different method for playing music
6. conducted experiment in different audio sound clip
7. generated the code script for audio and background music
8. helped to modify the code script
9. connected the circuit for prototype
10. participated in build up the hardware of the project
 - a. helped sawing the base
 - b. helped preparing the material for plastic flowers
 - c. helped painting the prototype
11. did testing on the audio part after installation
12. debugged during the testing
13. participated in video filming
14. helped in video editing

Reflection on Learning Outcome Attainment

Reflect on your experience during your project and the achievements you have relating to at least two of the points below:

- a. Engineering knowledge
- b. Problem Analysis
- c. Investigation
- d. Design/development of Solutions
- e. Modern Tool Usage
- f. The Engineer and Society
- g. Environment and Sustainability
- h. Ethics
- i. Individual and Team Work
- j. Communication
- k. Project Management and Finance
- l. Lifelong Learning

Point 1: Communication

I have improved my communications skills as a result of working on this project, and I can now make my points to my teammates with clarity. Additionally, I developed my listening skills, which help me fully comprehend situations so that I can make the best possible response. I learned through this project that effective team communication is crucial because it keeps disagreement and uncertainty from slowing down our project by ensuring that key players are aligned on its objectives and understand exactly what is expected of them. Additionally, it promotes team trust, which improves collaboration throughout the entire project. Every Wednesday, our team will gather in the lab for a shared meeting to discuss the phases we were in at the time. We will also talk about any updates to this project in the Telegram group. I also learned how to appreciate my teammates and keep everyone informed via our team's communication.

Point 2: Lifelong Learning

I've never used or learned how to use Arduino before. I began my training for this project with Prof. Andy's online Arduino workshop. I then continued it with a few YouTube tutorial videos and began using Tinkercad to program my first Arduino work. Throughout the process of the project, I experimented with a variety of components in order to play audio sounds or audio clips. I discovered that using Arduino is incredibly entertaining and has a lot of potential for creating a better product. With this project, I came to the realization that lifelong learning is crucial since it can lead to possibilities in the future, help me identify my passions, and foster my creativity. As I can continue to learn new things and expand my knowledge, I feel more confident and prepared to take on challenges and new opportunities.