

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

Individual Report

Name: Pan Junyu

Group No: 7

Project Title: Flowerscent

Contributions to the Project (1 page)

1. Research on MP3 files editing (Amplifying amplitude and altering frequency)
2. Soldering of wires for sound and design team
3. Setting up of Aduino Board
4. Research on the software/codes to inculcate the sound we choose to the arduino boards
5. Asist in the design team to construct flowers
6. Research of ways to use PCM method for code construction.
7. Testing of ultrasonic and pressure sensor to determine the best type of sensor to use
8. Installation of sensors and adruino setups to the prototype
9. Testing and debugging of codes
10. Assist in props making and casting for final video
11. Speaker for Presentation

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: Problem Analysis

As a member of a sound team, my team members and I must build a working sound system to incorporate into our overall project. Since we do not have any passed down components from the previous projects, we are tasked to do everything from scratch, by ourselves. Throughout the research and testing process though we managed to find many different ways to do it with the Arduino program however, there seems to be always a tiny issue that affects the overall setup every single time. For example; sound quality, sensor sensitivity, power issue and many others. By facing and solving all these difficulties one by one as a team, we had managed to develop our problem analysis skills to be able to identify what are the causes of these problems and solving them as a group.

Point 2: individual and Team Work

With a big team of 10 members, it is very challenging to work smoothly together. We have many unique characters in the team and furthermore, we each have our own schedules and other commitments that we need to face. Hence, it is very important that we are able to understand and support one another throughout this journey. And I believe that it is through this experience that I realize no matter how skillful or talented you are, it is still necessary to learn to rely on your team members and know how to work with unique individuals in order for us to be able to do well.