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Extended Abstract FYP projects

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SMART GRASS CUTTER

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Abstract - This project is about a grass cutter machine that using arduino and bluetooth to control. The aim of this project is to decrease the workload of worker and to reduce the time required to cut the grass in certain area. A prototype can be connected and controlled by the phone via bluetooth module. Bluetooth module is a device that receive the signal from the control device and synchronous the waveform from the controller and send it to the prototype. In this project, the bluetooth module is connected to the arduino and the arduino will be put some coding. The blade motor was placed on the bottom of the prototype. The Arduino consist of both a physical programmable circuit board and a piece of software or IDE that runs in the computer which is used to write and upload computer code to the physical board. The output is the LED and motor.

Keywords - reduce, connected, arduino, LED, motor

INTRODUCTION

This project proposes a smart system for controlling a miniature Grasscutter by using Arduino UNO. It is designed with same type but more advance function than others lawn mower. The main functions is it can cut the grass at any condition of landscape, which is control through an app on the phone for a distance up to 10meter. It can be deployed in the houses, civilian property, and industries etc to clean up the environment. For this project, we have divided into two section of circuit which use only basic electronic circuit. In this circuit we only use the coding for the arduino. For the whole control of the project, we use the bluetooth module that can connected to the mobile phone so the instruction for the project just need the user to control by the phone. Only circuit for motor blade section is direct supply from the battery and control by the switch.

METHODOLOGY

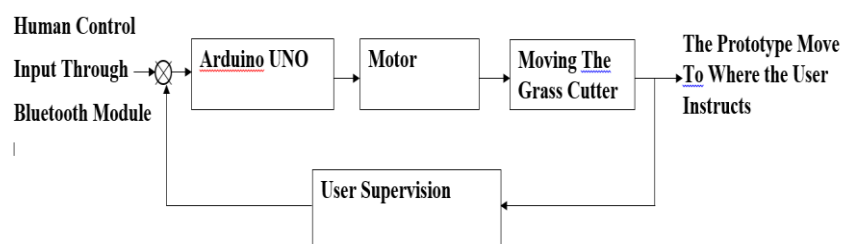


Figure 1: Block diagram of Smart Grasscutter

RESULT AND DISCUSSION

From the figure below which is software implementation, we use the bluetooth module type HC-06 to receive the input. When we connect the bluetooth module to the mobile phone, the LED will on continuously. From this result, we can conclude that our circuit is function properly.

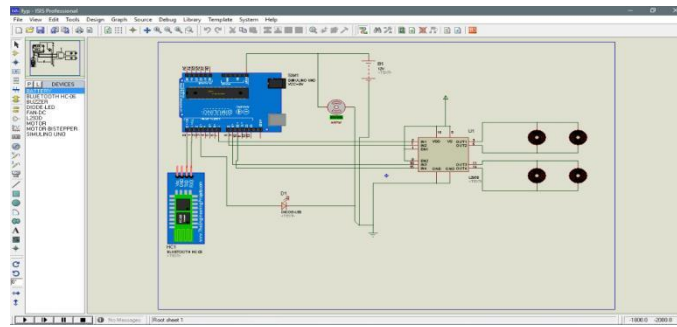


Figure 2: Software implementation

CONCLUSION

As a conclusion, this project is able to create a clean and beautiful campus environment. It is because this project help reduce the workload for the workers and complete the job with the least amount of energy usage and without any negative effect by the product. Finally, this product will be able to be mass produce and make available to the public. This will help make the nation as a cleaner country and the earth a healthier planet.

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