Executive Project Summary

Customdoro - Pomodoro Timer (2)

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For this project, a Pomodoro timer with a 25-5 work/rest cycle was requested. The requirements for this system included the detection of a cellphone on a specified location, accurate time tracking, user-system interface, brightness level control, intuitive enclosure design and a method to mute the system.

The first step on this project was to modularize all sections of the system and the design of a project schedule which displayed all deadlines and milestones over a ten-week period. Special attention was given to the enclosure requirements as the project demanded a design and an early order for it to be available for project delivery. Once the deadlines and requirements were clearly defined, a design prototype was created for each module and tested to ensure correct interface. Once each prototype was successful on their test, dimensions were measured and a rough draft for the first version of the enclosure was designed. Before enclosing the system, a complete system prototype was tested. Finally, the system was enclosed by a PLA case and tested.

The highlight of this project's progress can be found on the concise and descriptive interface definitions. This step was found to be so fundamental that most of the beginning phase of the project was allocated to accurately describing how each module interacts with the system. Time management was a crucial factor in this experience, as modules that require third-party ordering (such as the enclosure) result in a module that is bounded by an external factor that is inflexible, thus if an error were to occur on this kind of module, flexibility and creative solutions are in the only methods to accomplish a timely project delivery. For example, the final design for the enclosure contained sharp internal edges that were troublesome to print for the defined tolerances. The solution was filleting the inside of the corners to allow for an efficient PLA print, but the tolerances considered were not enough for a flush cover-base junction. The enclosure was modified by manually removing the excess as it resulted to be the fastest and cost-effective solution.

Project Timeline

Milestone desc	Category	Assigned to	Progress	Start	Days
Project Conception					
Project Requirement	Milestone	Beleno	100%	4/8/2021	1
Project Timeline	Milestone	Beleno	100%	4/9/2021	1
Project Report	Milestone	Beleno	100%	4/9/2021	1
Team Standards	Milestone	Beleno	100%	4/9/2021	1
Project Final Design	Goal	Beleno	100%	4/11/2021	1
Design					
Power Supply	Low Risk	Beleno	100%	4/12/2021	2
Visual Display	Med Risk	Beleno	100%	4/13/2021	2
Audio Output	Med Risk	Beleno	100%	4/14/2021	2
Processing and Code	High Risk	Beleno	100%	4/17/2021	8
Enclosure	High Risk	Beleno	100%	4/25/2021	5
Deliverables					
Block 1	Goal	Beleno	100%	4/16/2021	1
Block 2	Goal	Beleno	100%	4/30/2021	1
Final Delivery	Goal	Beleno	100%	5/21/2021	1
Documentation					
Troubleshoot	High Risk	Beleno	100%	5/1/2021	18
Writeup Compillation	Med Risk	Beleno	100%	5/19/2021	2
Delivery	Goal	Beleno	100%	5/21/2021	1