Updated CPS353 Software Engineering Proposal

Group Details

Group Number	Simulation 01
Group Members	Michael DiNardi, Peter Estep, Stephen Gyurits, Daniel Ivče, Acacia Mastropaolo
Date	10/08/2021

Proposal Details

	Item	Description
1.	***Project***	
1.1	Proposed Project Title	Digital Circuit Prototyping Simulator
1.2	Summary	Accurately simulates logic gates on a functioning breadboard. Eventually expected to be used in conjunction with the Digital I/O board Simulator. For use as a tool in Computer Engineering courses.
2.	***Target Audience***	
2.1	Field	Simulation for Educational Purposes
2.2	Age Group	17 and up. College and beyond
2.3	Rating	G
3.	***Features***	
3.1	Useful Features	Fully functioning breadboard with three functioning IC Chips: AND, OR, NOT, as well as wires and an LED. Furthermore, this should result in the development of a finished product, allowing for an entire user experience. Additionally, a Digital I/O board commonly used for instructional purposes has been taken out of production making it difficult and expensive to obtain for students. To fill this demand, there is a simulated version in development. These logic gates should be able to connect to the simulated I/O board to help build a fully functional simulation environment.

4.	***Software / Languages***	
4.1	Software	Unreal Engine, Blender, Visual Studio Code, Visio
4.3	Purpose of languages / software (mentioned above)	• C++ used for basic logic and processing • Blender used for building 3D models • Unreal Engine used for environmental simulation • Visual studio code for integrating C++ and unreal engine • Visio for flow charting