**CPS353 Software Engineering Proposal**

**Group Details**

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| Group Number | Simulation 01 |
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| Date | 09/02/2021 |

**Proposal Details**

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|  | Item | Description |
| *1.* | ***Project*** |  |
| 1.1 | Proposed Project Title | Digital I/O Simulator |
| 1.2 | Summary | Accurately simulates Digital I/O board and the connecting logic gates. To be used 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 | This Digital I/O board has been taken out of production making it difficult and expensive to obtain for lecture purposes. This can be used as an instructive aid. In addition to a working Digital I/O board, users should be able to connect logic gates and perform functions as they would in a physical laboratory. |
| *4.* | ***Software / Languages*** |  |
| 4.1 | Software | Unreal Engine, Blender |
| 4.2 | Language | C++ |
| 4.3 | Purpose of languages / software (mentioned above) | * C++ used for basic logic and processing * Blender used for 3D cad building * Unreal Engine used for software assembly |