EE 371, Project

Lab Objectives

Building off previous labs, you are ready to build your own project! This lab specification is designed to be vague, so you can design your own application yourself. Please be creative and it is a great chance to impress us!

System Requirement

1) Camera (driver provided)
2) Any input devices that not use USB (for example mouse, keyboard, joystick, etc. Driver files can be found in this page <https://class.ece.uw.edu/271/hauck2/de1/index.html>. However, switches, buttons would not fulfill this requirement)
3) VGA
4) GPIO functions (for example, LEDs)
5) Sound (microphone and speaker)

Lab Demonstration and Submission Requirements

- Submit a technical lab report that summarizes the procedures and results obtained in the lab. The report should include
  - Abstract, introduction, procedure(s), results and analysis, and conclusion sections. The procedures and results sections should elaborate on the details of your design and experiments. Include screen shots of your code and simulation of the parking lot occupancy counter.

- In your report, include the block diagram and the state diagrams of the system.
- Submit the SystemVerilog of your project and the ModelSim waveforms of all modules.
- Submit the Flow Summary (produced during compilation) of compiling your system.
- In your report, include the number of hours (estimated) it took to complete this lab, including reading, planning, design, coding, debugging, testing, etc. Everything related to the lab (in total).
- Submit your report and programs to Canvas. No hard copies.
- A 4-5 minute video demonstrating the functionality of your group's project.