**EEE/CSC 230**

**Final Lab**

Christopher Chastain

Wen Fang

Dhiraj Sharma

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Traffic Light Controller

Our controller starts with a green light on the main road and a red light on the secondary road. If the button is not pressed, the green light on the main road repeats the 10-second green light loop, while the secondary road keeps the red light. If the button is pressed, the green light on the main road lasts less than ten seconds, the green light does not change until the green light lasts more than ten seconds before it enters the yellow light state. When the button is pressed and the main road green light has lasted for more than 10 seconds, the green light is converted to a yellow light for three seconds and then to a red light. The traffic light on secondary road will be turned into a green light for 10 seconds. If the button is pressed for 10 seconds, secondary road will remain green and the main road will remain red. After the secondary road is converted to green for 10 seconds and the button is not pressed down, the green light will be converted into a three-second yellow light and will eventually return to the red light state, and the main road will change back to the green light loop and wait for the next button to be pressed.