



Project #2

On-demand Traffic Light Control



Name: Johnathan Gamal Abdel Raouf Tadros

System Description:

- This Project performance is divided into two modes:
 1. Normal Mode:
 - This is the default starting mode.
 - The Cars Traffic Lights will be operated as follows:
 - a) The green light will be operated for 5 seconds.
 - b) The yellow light will blink for 5 seconds.
 - c) The red light will be operated for 5 seconds.
 - d) The yellow light will blink for 5 seconds.
 - e) The green light will be operated for 5 seconds.And so on.
 - The Pedestrian Traffic Lights are not operating throughout this mode.
 2. Pedestrian Mode:
 - This mode starts once the button is pressed.
 - It lasts for a limited duration then the Normal Mode is started again until the button is pressed again.
 - The Traffic Lights will be operated as follows:
 - If the button is pressed while the cars' red light was ON:
 - a) The green pedestrian light and red cars light will be ON for 5 seconds.
 - b) Then the yellow light in both traffic lights will blink for 5 seconds.
 - c) The red pedestrian light and green cars light will be ON for 5 seconds.
 - d) Return to Normal Mode.

- If the button is pressed while the cars' green or yellow light was ON:
 - a) The yellow light in both traffic lights will blink for 5 seconds.
 - b) The green pedestrian light and red cars light will be ON for 5 seconds.
 - c) Then the yellow light in both traffic lights will blink for 5 seconds.
 - d) The red pedestrian light and green cars light will be ON for 5 seconds.
 - e) Return to Normal Mode.

System Constraints:

- If the button is pressed a long press, this will cause no effect other than the effect of a single press.
- If the button is pressed a double press, this will cause no effect other than the effect of a single press.

System Design



