HW 3 Report

To complete this assignment, I used StateS to simulate multiple FSMs to achieve the desired output. I used the properties of states to create a machine that output grey binary number code in ascending order and direct traffic lights. To direct traffic lights I created three machines. One was a big circle which timed the machine correctly with the outputs, one removed unneeded states and created a timer in the middle for light direction, and one used user input to switch lights used only when cars pulled up to one traffic light. Pictured below are my designs in StateS. A diagram of a network

Description automatically generated

A diagram of a circle with circles and lines

Description automatically generatedA diagram of a network

Description automatically generatedA diagram of a computer program

Description automatically generated

This assignment taught me about the importance and theoretical operation of sequential circuits. Sequential circuits depend on both previous states as well as the current input (unlike combinational circuits which only depend on input). It also helped me understand how timers and control units work on a hardware level. Overall I learned about logic and circuits conceptually from this assignment.