



Consider the intersection in the picture. The traffic lights are marked as to correspond to the two columns of lights on your ARXD19 device. This challenge is supposed to be hard. We expect you will have to do some research before completing this.

General Specifications:

- Red should be on for 5 seconds every cycle.
- Yellow should be on for 1.5 seconds every cycle, but is only used when going from green to red.
- Advanced Green, if called for, shall be on for 2.5 seconds.
- Solid Green should be on for 5 seconds every cycle. This is in addition to the 2.5s if Advanced Green is required.
- Any changes in configuration have to be done in such a way as to not expose drivers to potential hazards.
- It is assumed in this assignment that all drivers obey the traffic signals all the time.
- We recommend saving each assignment in a different file ("Sketch") so that you can revisit them later or ask someone for help.

Assignment #1 - Program the ARXD19 in such a way that it will run the traffic lights normally, without any advanced green signaling.

Assignment #2 - Scott Street is a major street and will require Advanced Green on every cycle. David Street does not require Advanced Green. Program the traffic light accordingly.

Assignment #3 - Both streets now require Advanced Green on every cycle. Program the traffic lights accordingly.

Assignment #4 - The Advanced Green light for Scott Street is controlled by Switch #1. The Advanced Green light for David Street is controlled by Switch #2. Program the traffic lights accordingly so that they operate safely.