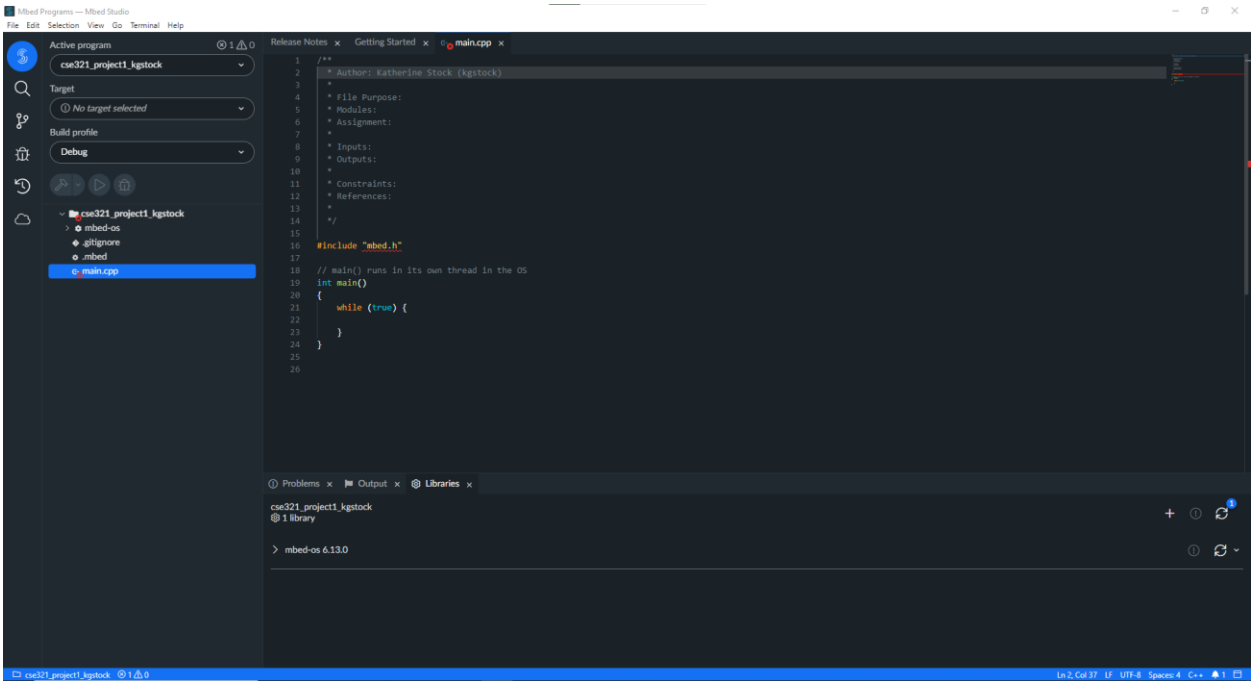
Part 3:



Part 4:

GitHub Username: kgstock716

Part 5:

Ask:

- What is the purpose?
  - Stop traffic and protect geese based the geese's proximity to the road.
- What are the inputs?
  - Locations of cars and geese from the sensors.
- What are the outputs?
  - Turning traffic light from blinking red and acting as a stop sign to solid red and acting as a complete stop.
- Are there constraints or a relationship between inputs and outputs?
  - Yes, the output of changing the traffic light depends on if there are geese close enough to traffic, which is detected by input.

Katherine Stock

Research/Imagine:

- IoT is the internet of things which means we will use an embedded system with sensors.
- What distance from traffic should trigger the light change?
    - I'd estimate a 3 or 4 feet wide shoulder on roads around campus with moderate traffic. The sensor should trigger just before the geese are on the road.
    - This might change depending on where the signal is going and how much traffic is common.
- Treat the signal as a stop sign normally (blinking), change to stop traffic when the sensor(s) reads the geese within the decided radius, change back to stop sign (blinking) once the sensor(s) read the geese to be away from traffic on the other side of the road.
- Is it better to use two sensors?
    - One on each side of the road so that one sensor always has readings on the geese, even if the other is blocked by traffic.
    - Geese can come from either side, decided what sensor placement is best once location is picked.
- How long is a good wait time before reading sensors again?
    - Geese do not move very fast and usually travel in families.
    - 3 minutes might be a good place to start, adjust over time but better to wait too long than not long enough.

Katherine Stock

Plan: