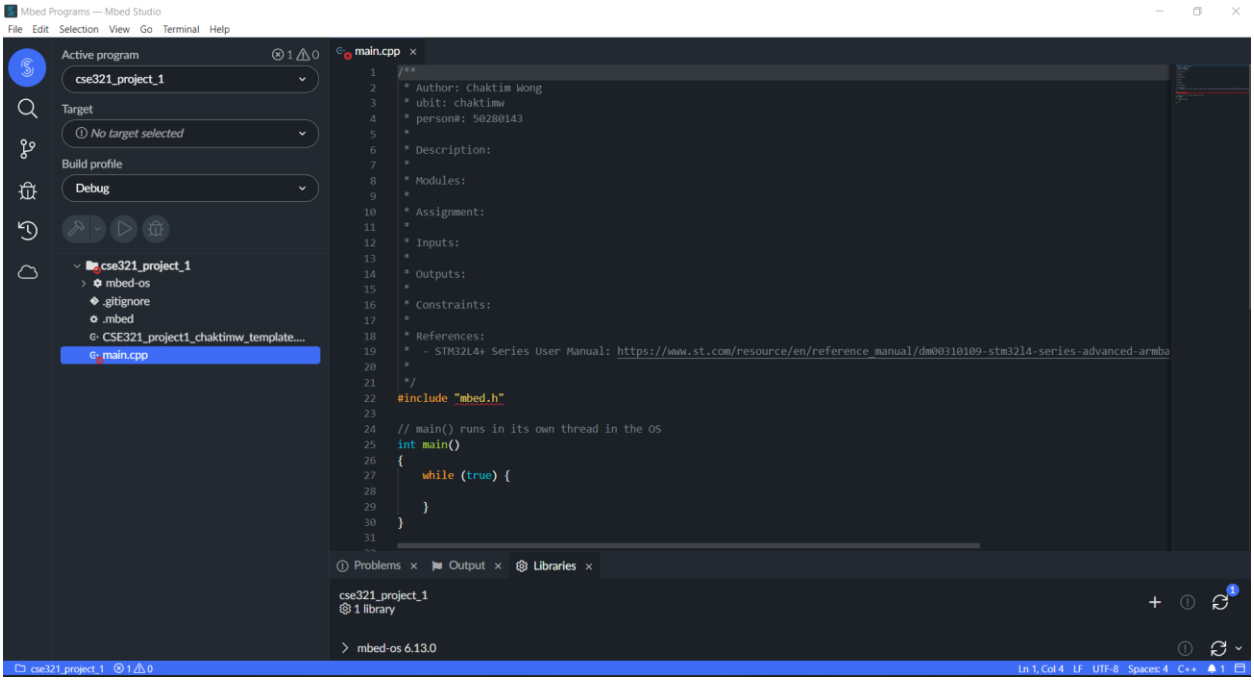
Code Template (for part 3):



Github Username (for part 4):

chaktimw

Part 5: Establishing Good Planning Practices

Ask

Objective: Create a device that can detect traffic and geese, and stop traffic, when needed, to protect geese by turning the traffic light red.

Inputs: Sensors that can detect traffic and geese.

Outputs: Traffic light is red or blinking red.

Constraints/Relationships: Knowledge of how the sensors work, how to handle their inputs on the device's embedded OS, and how to control the traffic lights through the device.

Research/Imagine

Research Tasks:

- Research how to create programs on the device's embedded OS.
- Research how the sensors work, and how to interpret the data received from them through the device.
- Determine what kind of readings from the sensors indicate that geese are in sight.
- Find out how to control the traffic lights.
- Figure out a system to turn the traffic lights red when the sensors detect geese, and make the traffic lights blink after the sensors do not detect any geese.

Possible Solutions:

- Place the sensors on the sidewalks and turn the traffic lights red upon detecting geese. After a set amount of time passes, turn the traffic lights back to blinking red.
- Place the sensors on the sidewalk and on the crossroad. When geese are detected, turn the traffic lights red until no geese are detected on any sensors, then turn the lights back to blinking red.

Plan

Select a plan:

The second solution is the most promising due to how it guarantees that geese are off the road before turning the traffic lights back to blinking red.