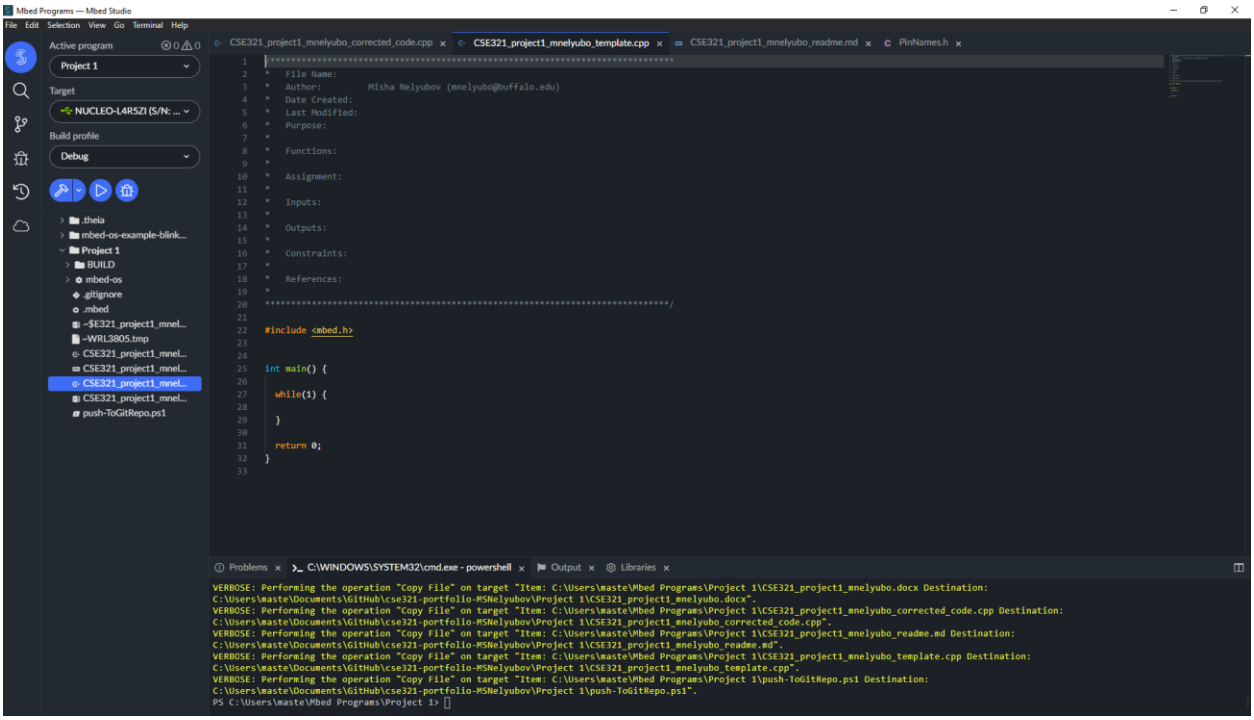
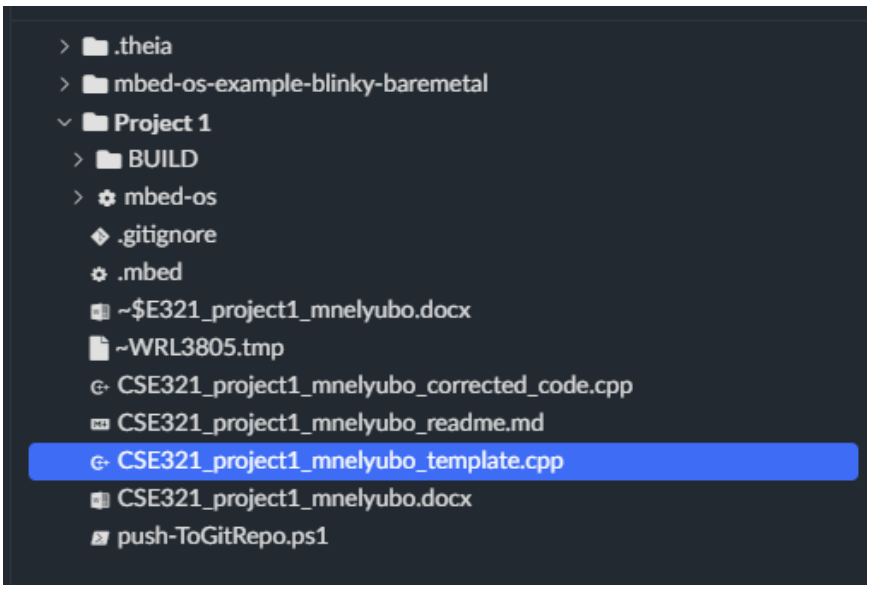
CSE321 Project 1

Part 3:

IDE Overview



Project Tree:



Standard Template with header:

```
/*****************************************************************************
*   File Name:
*   Author:         Misha Nelyubov (mnelyubo@buffalo.edu)
*   Date Created:
*   Last Modified:
*   Purpose:
*
*   Functions:
*
*   Assignment:
*
*   Inputs:
*
*   Outputs:
*
*   Constraints:
*
*   References:
*
*****************************************************************************/

#include <mbed.h>


int main() {

  while(1) {

  }

  return 0;
}

```

Part 4: GitHub

Account Name: MSNelyubov

Repository URL: https://github.com/CSE321-Fall2021/cse321-portfolio-MSNelyubov/tree/main

Part 5: Planning a Traffic Controller

Given problem statement from the instructions:

An IoT device is needed for controlling traffic on campus based on geese proximity. These are special geese, and they need to stay safe. The device will be programmed with a standard embedded OS and will make use of sensors for detecting traffic and geese. The traffic is controlled by a single light that will stop traffic in all directions, when needed, to protect the geese by turning red. When traffic can flow, the light blinks red and is treated as a stop sign.

Purpose

- Protect geese from traffic by signaling traffic to stop for a traffic light

Inputs

- The presence of geese
    - Must be detected by sensors

Outputs

- A Red LED that will either blink or stay lit up
    - Brightness must be sufficient to be seen by oncoming traffic in day and nighttime conditions
    - Light output power supply should remain on at all times

Relationships

- The output LED should blink in the absence of geese and stay consistently bright in the presence of geese.

Implementation Plan