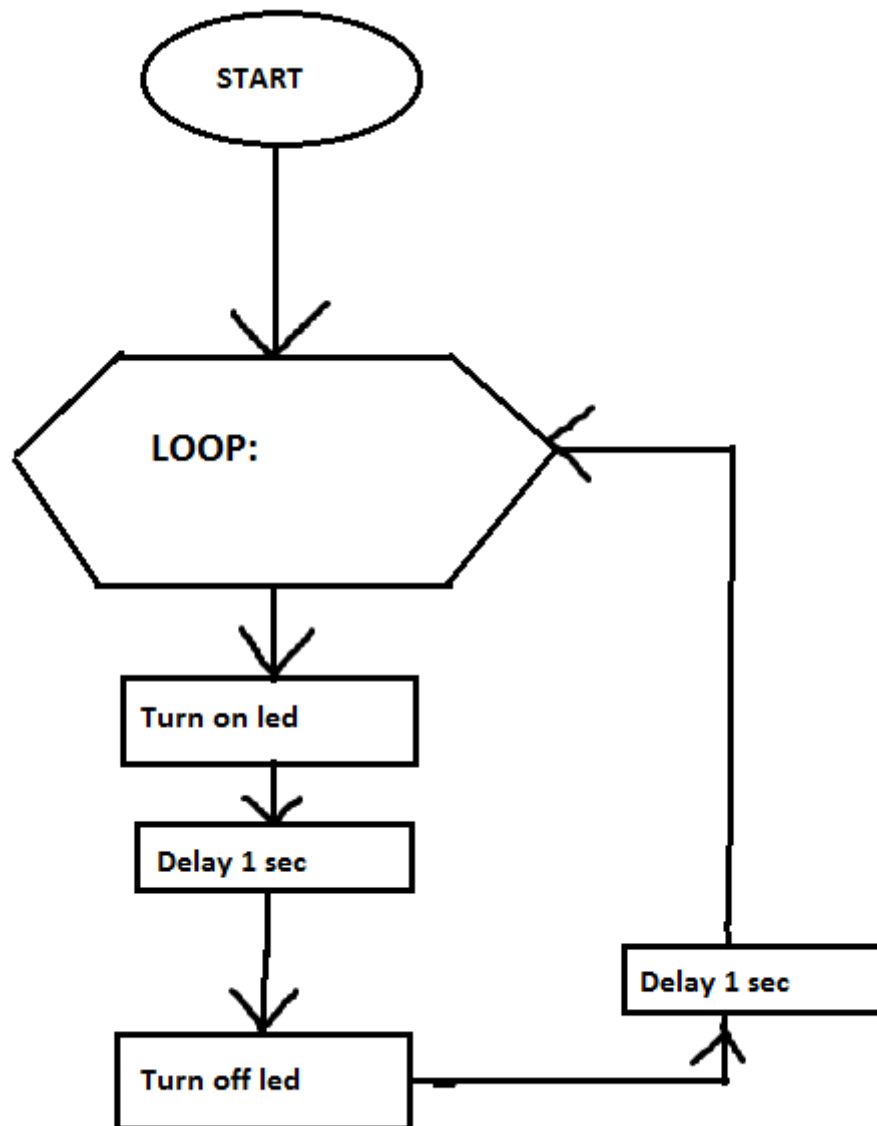# GEBZE TECHNİCAL UNIVERTİSY

ELEC 335

LAB 2 REPORT

BERKAY TÜRK

171024024

PROBLEM 1: Write assembly code that will toggle the on-board LED at a rate of 1 second.
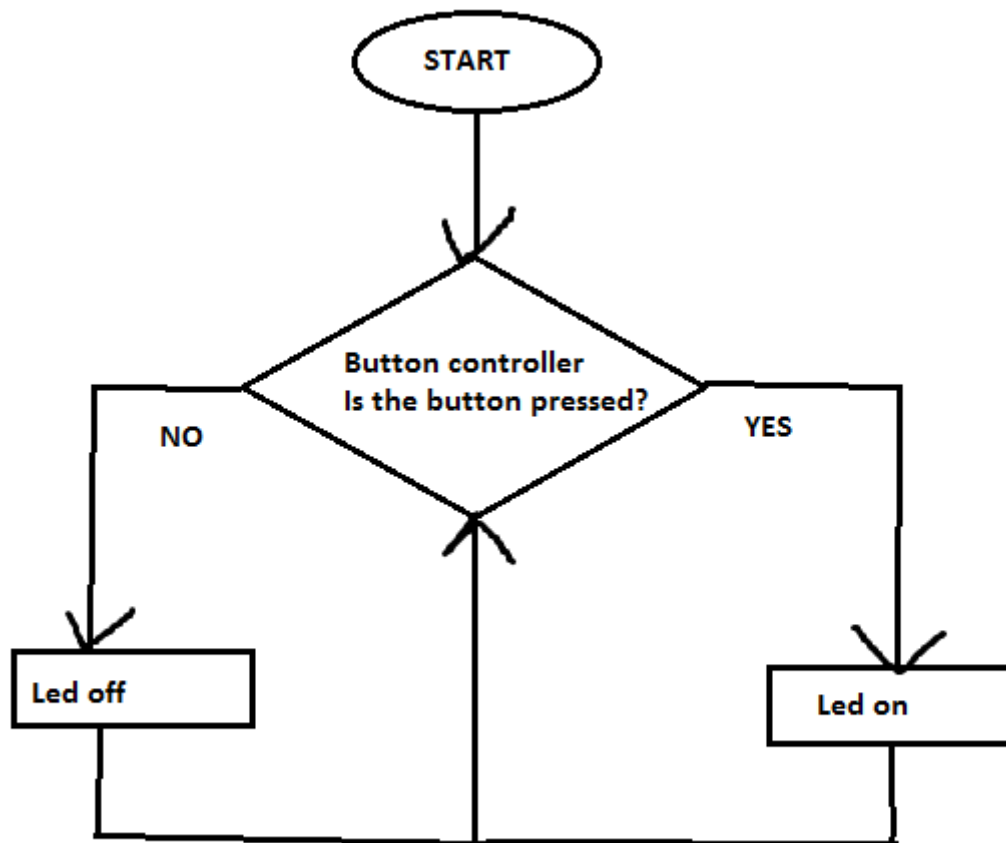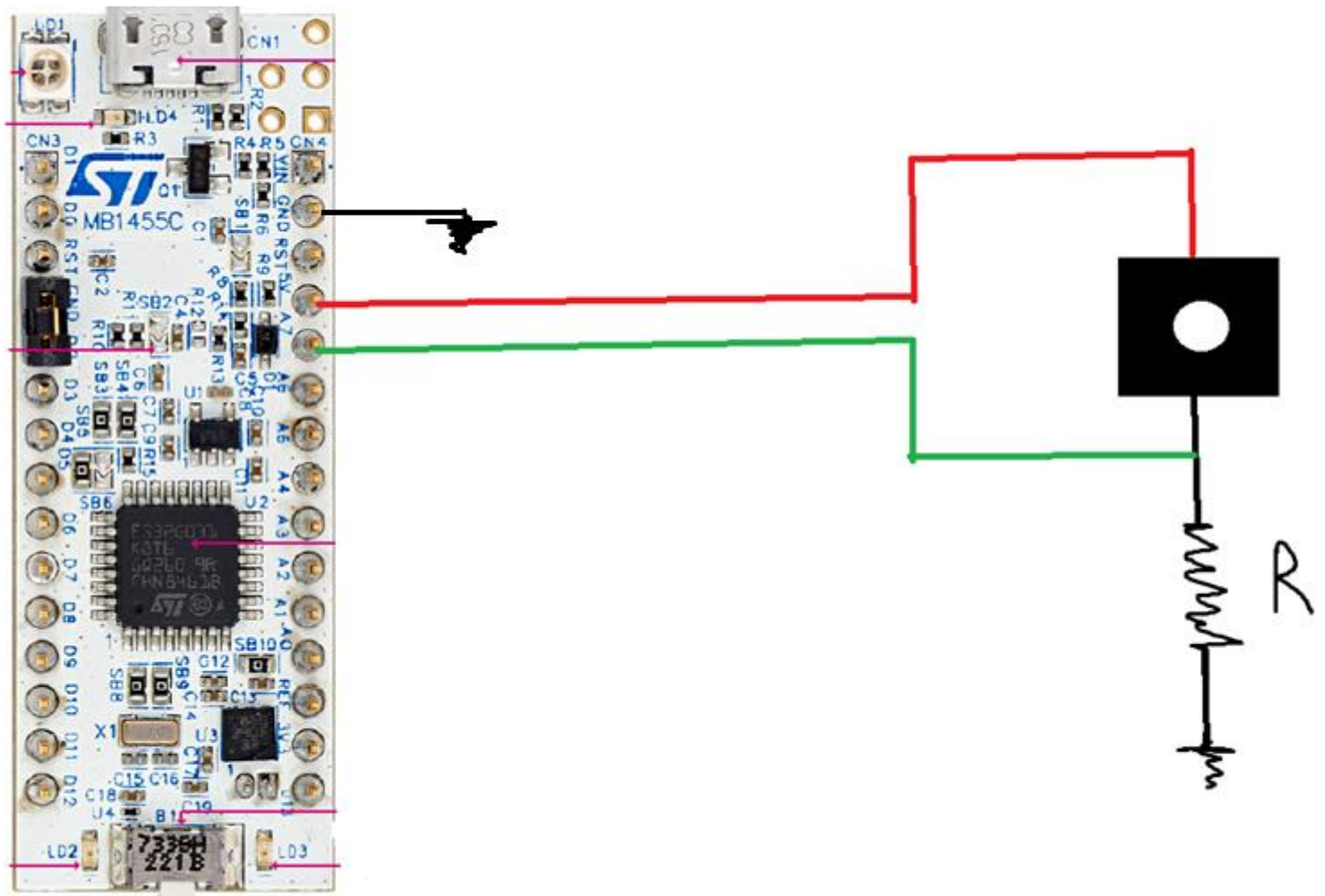

Flowchart

1.Problem video:

PROBLEM 2: Connect a button to the board, and turn on the on-board LED when the button is pressed. When the button is released, the LED should turn off.
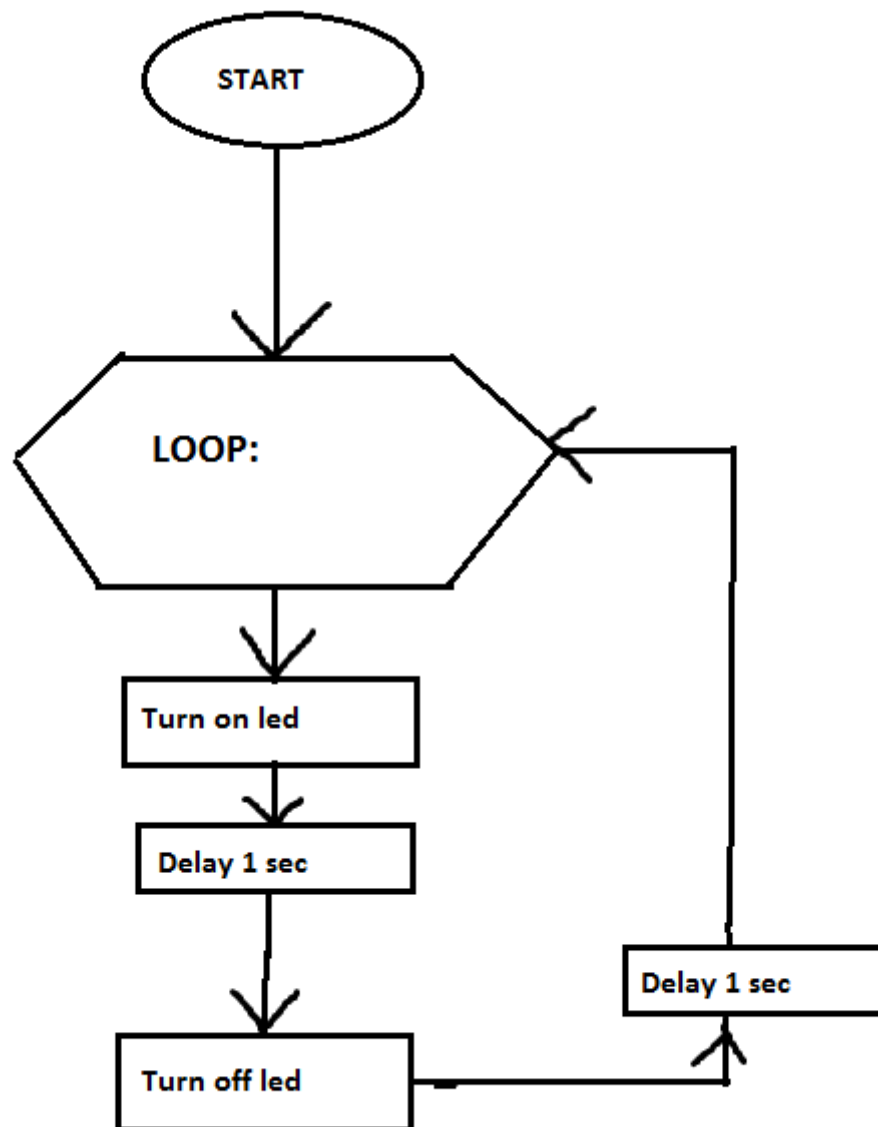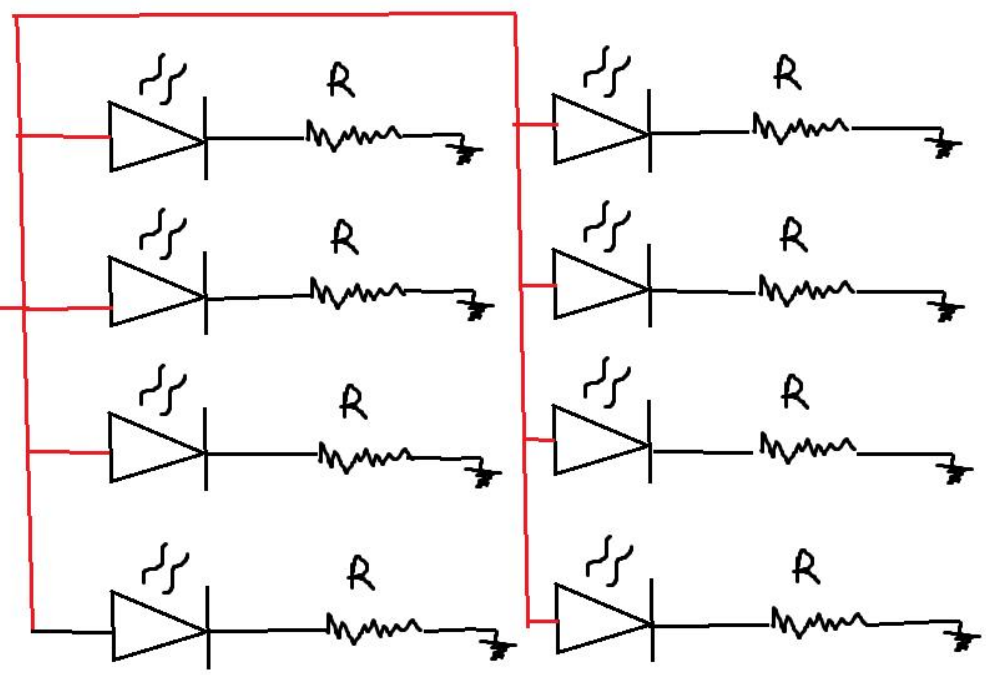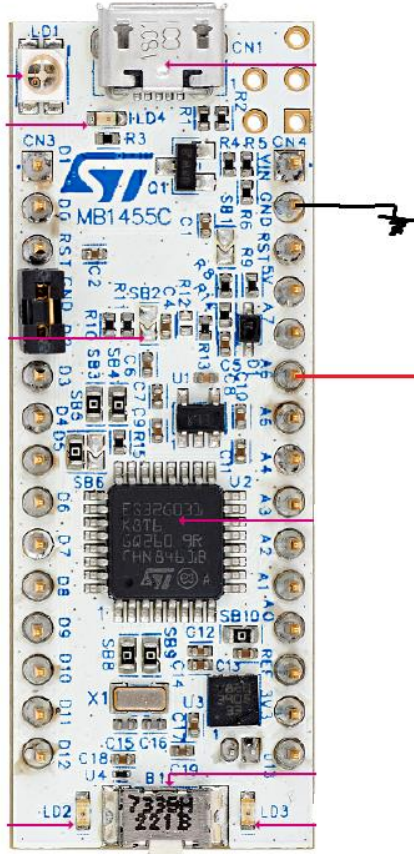
START

Button controller
Is the button pressed?

NO

YES

Led off

Led on

Flowchart

Connection Diagram

2.Problem video:

https://youtu.be/sU6uhQF-gjQ

PROBLEM 3: Connect 8 external LEDs to the board, and toggle all the LEDs at the same time at a rate of 1 second.

```
        ┌─────────┐
        │  START  │
        └─────────┘
             │
             ▼
      ╱─────────────╲
     ╱    LOOP:      ╲──────────┐
     ╲               ╱          │
      ╲─────────────╱           │
             │                  │
             ▼                  │
      ┌─────────────┐           │
      │ Turn on led │           │
      └─────────────┘           │
             │                  │
             ▼                  │
      ┌─────────────┐           │
      │ Delay 1 sec │           │
      └─────────────┘    ┌─────────────┐
             │           │ Delay 1 sec │
             ▼           └─────────────┘
      ┌─────────────┐           ▲
      │ Turn off led│───────────┘
      └─────────────┘
```

Flowchart

Connection Diagram

3.Problem video:

https://youtu.be/pCwPqmRLxgE

PROBLEM 4: Connect 8 LEDs and 1 button to the board, and implement a shift pattern.

```
                          START

                       Is it pressed?
         NO                               YES
                                                    left shift open
                                                    close leds
   right shift open close
   leds

                                          YES
                       Is it pressed?

                          NO
         left shift open                   right shift open close
         close leds                        leds
```
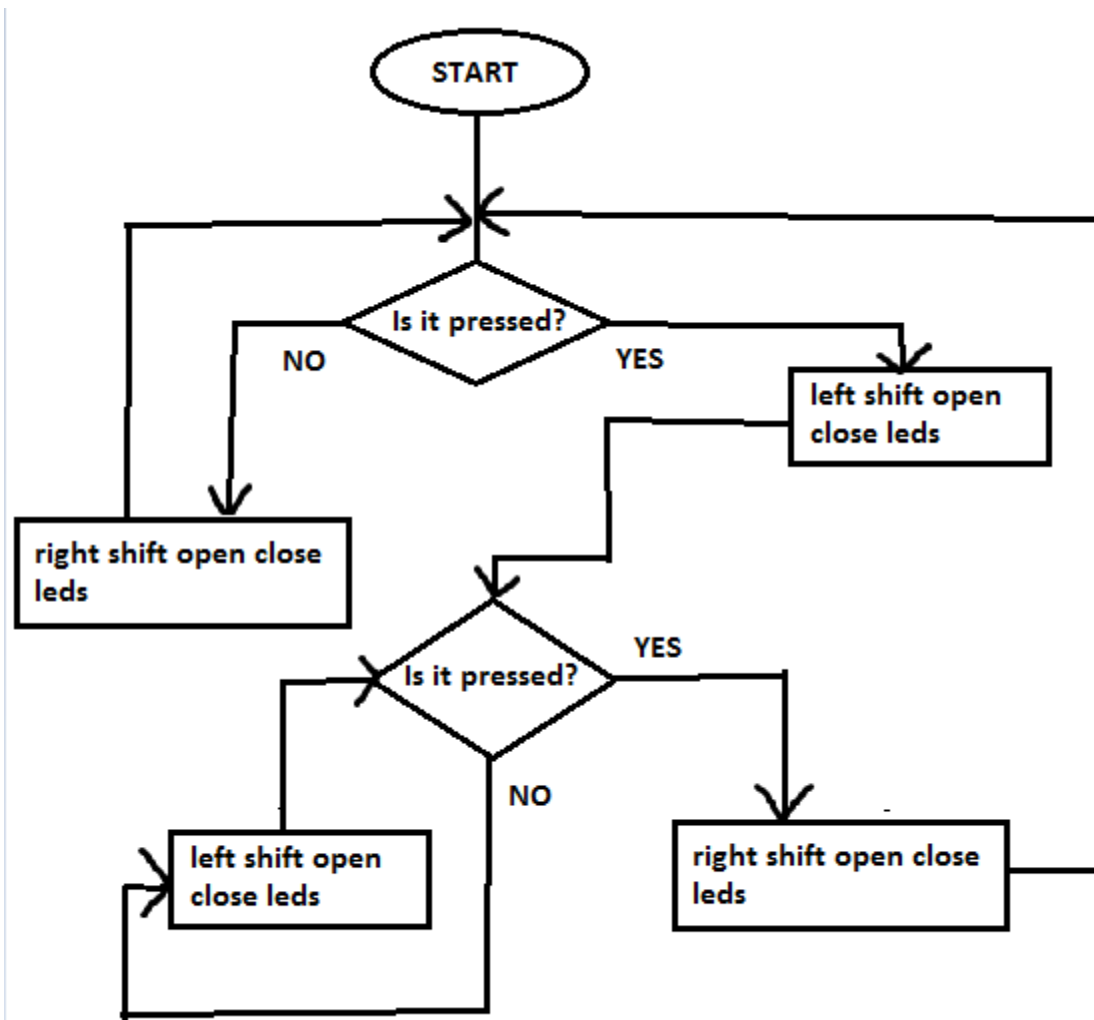
Flowchart

My code is open to improve .In some place the function can be written and shortened.

Sometimes when the button is pressed, it cannot be detected depending on the time.

Connection Diagram

4.Problem video:

https://youtu.be/TxQHAdHFjT4