Name: Youssef Ahmed Abbas Mohamed

1. Hardware Requirements

- 1. Four LEDs (LED0, LED1, LED2, LED3)
- 2. One button (BUTTONO)

2. Software Requirements

- 1. Initially, all LEDs are OFF
- 2. Once BUTTONO is pressed, LEDO will be ON
- 3. Each press further will make another LED is ON
- 4. At the fifth press, LED0 will changed to be OFF
- 5. Each press further will make only one LED is OFF
- 6. This will be repeated forever
- 7. The sequence is described below
 - 1. Initially (OFF, OFF, OFF, OFF)
 - 2. Press 1 (ON, OFF, OFF, OFF)
 - 3. Press 2 (ON, ON, OFF, OFF)
 - 4. Press 3 (ON, ON, ON, OFF)
 - 5. Press 4 (ON, ON, ON, ON)
 - 6. Press 5 (OFF, ON, ON, ON)
 - 7. Press 6 (OFF, OFF, ON, ON)
 - 8. Press 7 (OFF, OFF, OFF, ON)
 - 9. Press 8 (OFF, OFF, OFF, OFF)
 - 10. Press 9 (ON, OFF, OFF, OFF)



