

Assignment # 2

Due Date: Monday 2/12/2024

You want to monitor a battery voltage and gives a warning if its voltage level drops below 3.8V.

Your circuit during normal operation should read the battery voltage every 1 sec and display its value on a LCD.

If at any given time the voltage should drops below 3.8V, a beacon signal will light a LED for a duration of 20ms every 2 seconds and turns off all other unnecessary resources and turn s off the LCD to preserve the power and only the beacon led will be working.

Design a circuit to do such task, write the code in C using code vision and use proteus to simulate your circuit. Assemble and program your microcontroller using USBASP programmer.

Record a video showing your circuit during runtime. In the video state your name, ID and any problem you may have faced during wiring or programming.

(**Hint:** you can refer to week 6 and week 9 labs as a guidance)