App Project 1:

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State Diagram: LED off (RB8 off) prints Initial time Clock 32KHz TMR2 Interrupt 0 PB unpressed. Clear flag only PB3 is held prints countdown time for 3 or more seconds Interrupt occurs only PB3 held for less (delay_ms) Flag = 0 than 3 seconds only PB1 pressed Interrupt occurs only PB2 pressed (delay_ms) Flag = !Flag Reset timer to 0 -start or pause the countdown -IDLE while counting Increment countdown Increment countdown minute by 1 second by 1 down -LED blinks at 1 second intervals When coundown is finished PB1 unpressed PB unpressed. PB2 unpressed prints" 00m:00s --ALARM" LED stays on

List of Tasks Performed by Each Group Member:

Ruha has the microcontroller kit and did all the testing for the app project, and when it comes to the programming, Ruha would share her screen on Zoom and we would all (Ruha, Jiho, and Mehdi) go through the code together in real time and provide input on how to complete the project. The state diagram was done by Mehdi, and we all provided input where needed for any changes. Ruha also did the demo video since she has the kit.