# App Project 2

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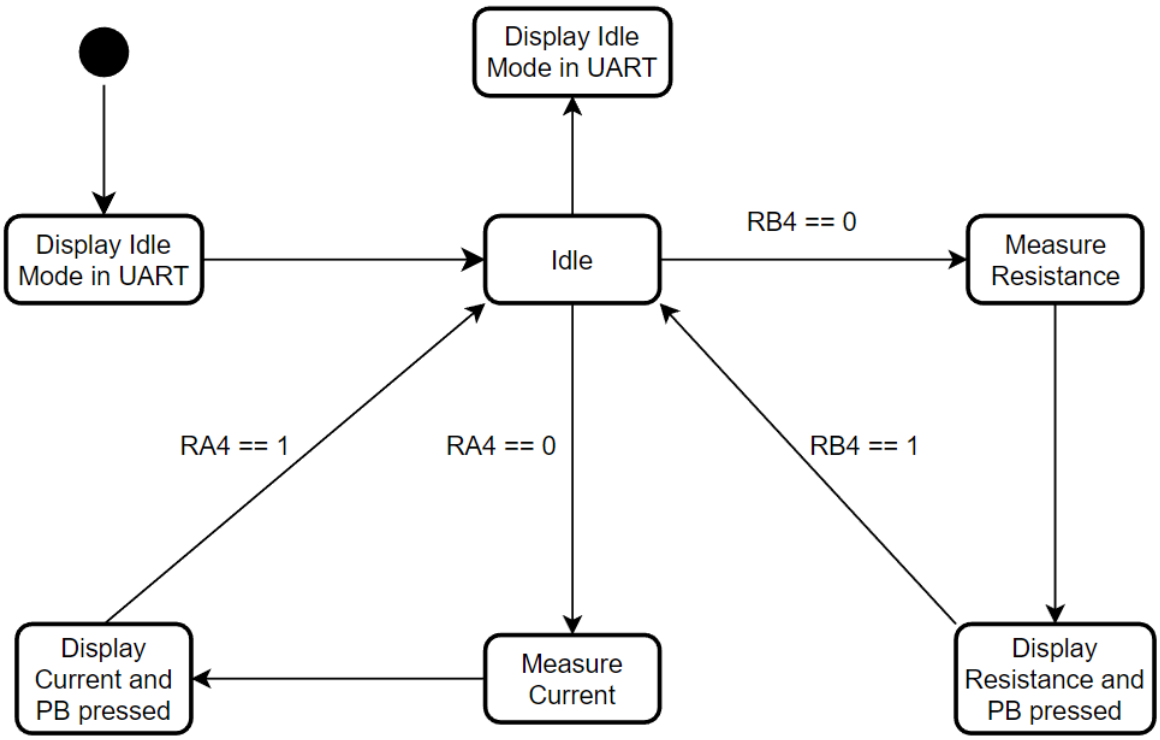
This app project designed a multimeter that can measure current and resistance. To obtain these values, the push buttons will be designed to change states, which PB1 for idle mode and a reset will be used in case the code is stuck in idle mode, and PB2 and PB3 set to measure current and resistance, respectively. The values obtained from PB2 and PB3 can be changed using the potentiometer. All the information will be shown in the UART display such as the current current, current resistance, and which push button is being pressed. The peripherals we used are

1. UART: Display the output
2. I/O control: Connects input and output devices to the bus system of a CPU, needed to connect our inputs and outputs to the CPU
3. ADC: Analog to digital conversion to convert current and resistance to a digital format
4. Timer delays: Used to generate precise time delays to streamline functionality
5. Interrupts: Used in various modules to ensure tasks are executed in the proper order and avoid errors
6. Clock: Used to generate signals from high and low states, and regulate the speed at which tasks are executed.

State Diagram:




Tasks performed:

Ammar: Code and Report

David: Code, state diagram, and video

Yaseen: Code and circuit