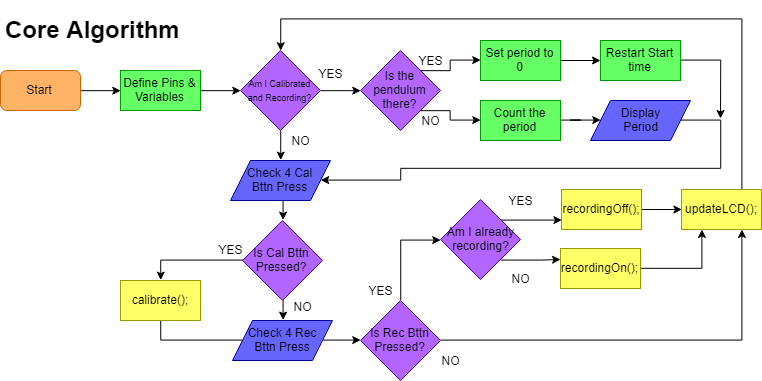
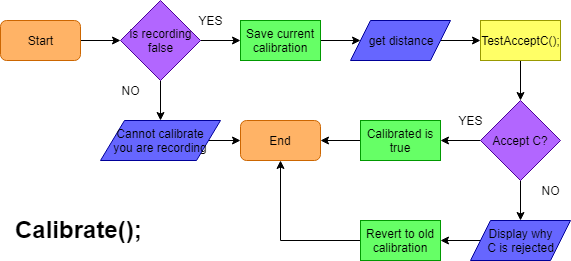
**Criterion B: Design**

**Program**

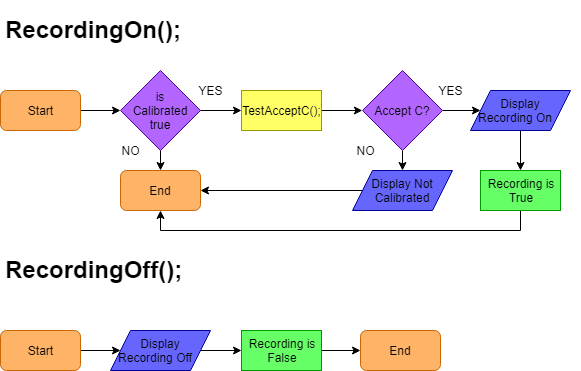
Core Algorithm:



Here is the algorithm for the calibrate function:



Recording Functions:



**Circuit**

List of Materials

|  |  |  |  |
| --- | --- | --- | --- |
| **Part Name** | **Part Number (source)** | **Quantity** | **Purpose** |
| LCD Display |  | 1 | Display Messages to the user |
| Ultrasonic Sensor | HC-SR04 | 1 | Measure distances |
| Push Button |  | 2 | Calibrate, Recording |
| LED |  | 4 | Power, Detected, Recording, Calibrated |
| Resistor |  | 4 | For LEDs |
| Arduino Mega | Arduino Mega 2560 REV3 | 1 | Microcontroller |
| Potentiometer |  | 1 | For LCD Display, maybe replace with resistor |
| Switch |  | 1 | Power on/off |

Circuit Diagram