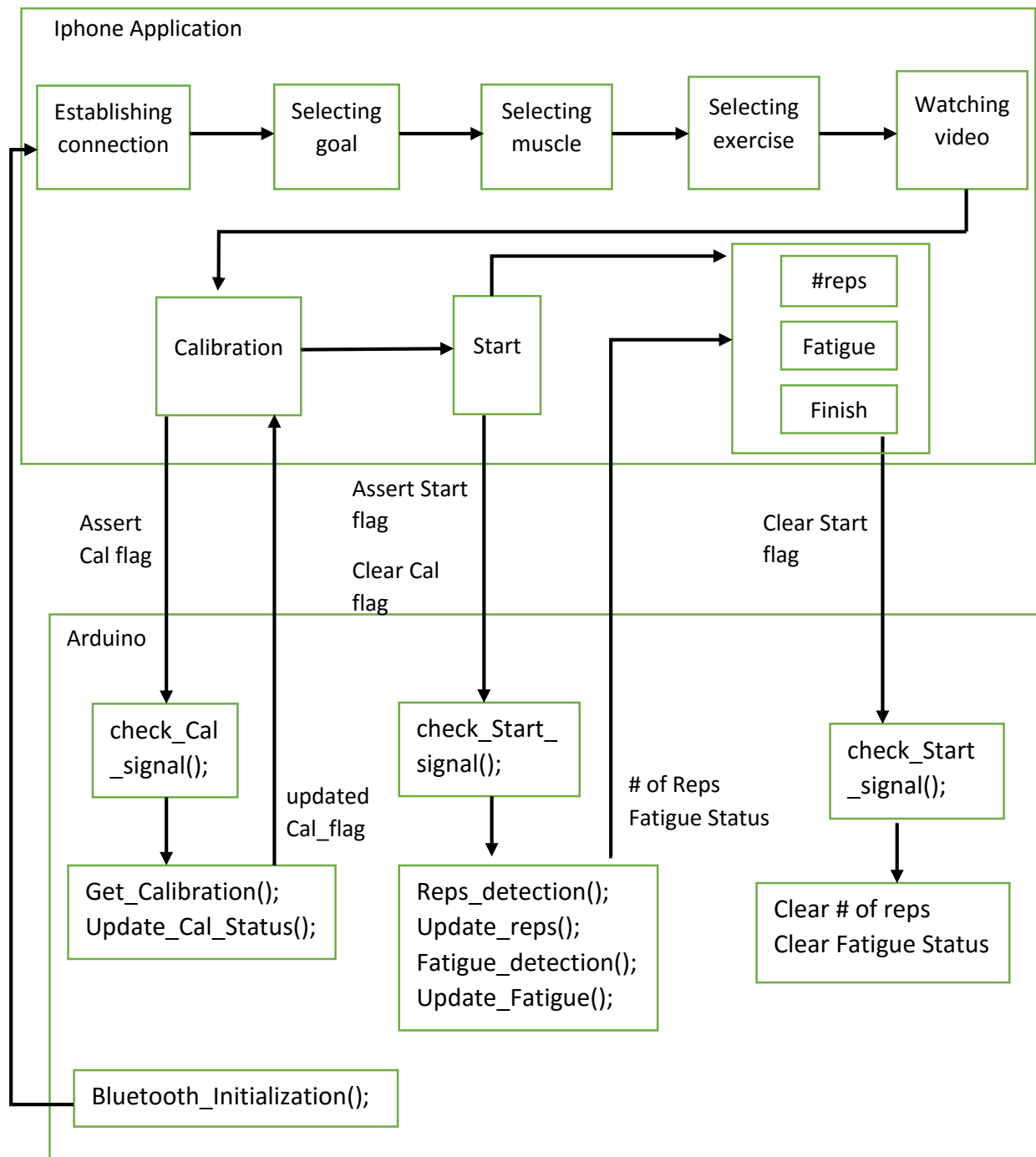


Flow Chart For Connection between Iphone Application and Arduino



Arduino Code

Bool cal_flag;

```
Void setup() {
    Bluetooth_Initialization();
}

Void loop() {
    check_Cal_signal();          // Check if Cal_flag is asserted
    while(Cal_flag) {
        Get_Calibration();      // Get Calibration result and update cal_flag
    }

    check_Start_signal();        // Check if Start_flag is asserted
    While(start_flag) {
        If(Rep_dection()) {
            Rep++;               // Increment rep
            Update_reps();       // update rep's value
        }

        If(Fatigue_detection()) {
            Fatigue_status = 1;  // Assert fatigue_status
            Update_Fatigue();     // Update fatigue_status
        }
    }
}

Void timer_ISR() {
    ADC();
    check_Start_signal();        // Check if Stop_flag is asserted
    if (stop_flag) {
        Clear_All();            // Clear rep's value and fatigue_status
        start_flag = 0;         // Clear start_flag
        stop_flag = 0;          // Clear stop_flag
    }
}
```