Level 4 - Button Modes

```
#include <UltraDistSensor.h>
#include <LiquidCrystal_I2C.h>
#include <Wire.h>

UltraDistSensor  Sensor Name ;
LiquidCrystal_I2C lcd(The LCD Address , 20, 4);

int Button Name  = ButtonPin ;
int Button Value  = 0;
int Button Clicks Variable  = 0;

void setup() {

        lcd.init( );
        lcd.backlight( );
        Sensor  Name  .attach(TrigPin Name, EchoPin Name);

        pinMode(Button Name , INPUT);

}

void loop() {

        lcd.setCursor(X Coordinate  ,  Y Coordinate);
        Button Value  = digitalRead(Button Name );

        if(Button Value  ==  HIGH){

                Button Clicks Variable ++;
                if (Button Clicks Variable  >=  4){
                        Button Clicks Variable  = 0;
                }

        }
```

```
if (Button Clicks Variable == 0){

        lcd.print(“ FirstName ”);
        lcd.setCursor(X Coordinate , Y Coordinate);
        lcd.print(“ LastName ”);

} else if (Button Clicks Variable == 1) {

        lcd.clear( );
        lcd.print(“ Distance: ”);
        int Distance Variable = Function Name();

        if( Distance Variable == 0 || Distance Variable == -1 ){
                lcd.setCursor(0, 1);
                lcd.print(“Object Not Found”);
        } else {
                lcd.print(Function Name );
        }

} else if (Button Clicks Variable == 2){

        int Value 1 Name = Function Name ;
        delay(200);
        int Value 2 Name = Function Name ;
        lcd.clear( );

        lcd.setCursor(X Coordinate , Y Coordinate);
        lcd.print(“Object”);

        if(Value 1 Name > Value 2 Name ){

                lcd.setCursor(X Coordinate , Y Coordinate);
                lcd.print(“Outgoing”);

        } else if(Value 1 Name < Value 2 Name ){

                lcd.setCursor(X Coordinate , Y Coordinate);
                lcd.print(“Incoming”);

        } else {

                lcd.setCursor(X Coordinate , Y Coordinate);
                lcd.print(“Stationary”);
        }
```

```
        } else if (Button Clicks Variable == 3){

                int Value 1 Name = Function Name;
                delay(500);
                int Value 2 Name = Function Name;
                lcd.clear( );

                int Speed value = ;
                lcd.setCursor(X Coordinate , Y Coordinate);
                lcd.print("Speed: ");
                lcd.setCursor(X Coordinate , Y Coordinate);
                lcd.print(Speed value);
                lcd.print(" inches/sec");
        }

        delay(300);

}

int Function Name () {

        float distances = 0;
        float numTimes = 0;
        float  Distance Storage Variable;

        for(int i  =  0; i  <  Number of Readings;  i++){

                Distance Storage Variable = Sensor Name .distanceInInch( );

                if(Distance Storage Variable != 0.0){
                        distances += Distance Storage Variable;
                        numTimes;
                }

        }

        Int averageDistance = Calculate the Average Distance;
        return averageDistance;

}
```