A circuit board

Description automatically generated

1. The black wire on the far right was inserted into the other side of the bread boards GND, and the other black wire is connected to ground. This grounded both sides of the board.
2. The two buttons were placed in parallel with each other and both were grounded to the board. Their power leads went to pins 11 and 12 respectively on the Arduino.
3. The Passive buzzer was then placed in the board, grounded, and then the power lead went to pin 10 on the Arduino.
4. Placed far enough away for spacing, the FND display was placed in the board, grounded on the extended ground I hooked up in part 1. To explain where each of the 8 wires go individually I feel is a bit redundant as they are color coded, but the wiring came from the notes and follows along with the graphic in the slides.
5. Extra care was taken to assure that each of the FND displays wires were in the correct pins, as this was a source of error for a while.
6. See attached video for demonstration.
7. The code came from the power point slides. I have comments explaining it.

//Vince Comaroto Assignment 10

#define FND\_A 2

#define FND\_DP 9

int beepPin = 10;

int btn1 = 11, btn2 = 12;

long randNumber;

boolean digit[10][8] = {

{1,1,1,1,1,1,0,0},//0

{0,1,1,0,0,0,0,0},//1

{1,1,0,1,1,0,1,0},//2

{1,1,1,1,0,0,1,0},//3

{0,1,1,0,0,1,1,0},//4

{1,0,1,1,0,1,1,0},//5

{1,0,1,1,1,1,1,0},//6

{1,1,1,0,0,0,0,1},//7

{1,1,1,1,1,1,1,1},//8

{1,1,1,0,0,1,1,0,}//9

};

void setup() {

for(int i=FND\_A; i<=10;i++){

pinMode(i,OUTPUT); //pin2~pin10 output

}

pinMode(btn1,INPUT\_PULLUP);

pinMode(btn2,INPUT\_PULLUP);

randomSeed(analogRead(0));

randNumber = random(11,13); //Random 11 or 12

Serial.begin(9600);

}

int j =9;

void loop() {

for(j=9; j>=0;j--){

for(int i = FND\_A; i<=FND\_DP;i++){

digitalWrite(i,digit[j][i-2]); //Each pin low or high

chk\_btn();

}

if(j==0){

analogWrite(beepPin,20);

}else{

analogWrite(beepPin,0);

}

delay(1000);

}

}

void chk\_btn(){

while(true){

if(digitalRead(btn1)==LOW&&digitalRead(btn2)==LOW){

j=9;

randNumber = random(11,13); //random 11 or 12

Serial.println(randNumber);

}else if(digitalRead(btn1)==LOW){

if(randNumber==btn1){

Serial.println(randNumber);

analogWrite(beepPin,20);

delay(100);

}else{

delay(100);

}

}else if(digitalRead(btn2)==LOW){

if(randNumber==btn2){

analogWrite(beepPin,20);

delay(100);

}else{

delay(100);

}

}else{

break;

}

}

}