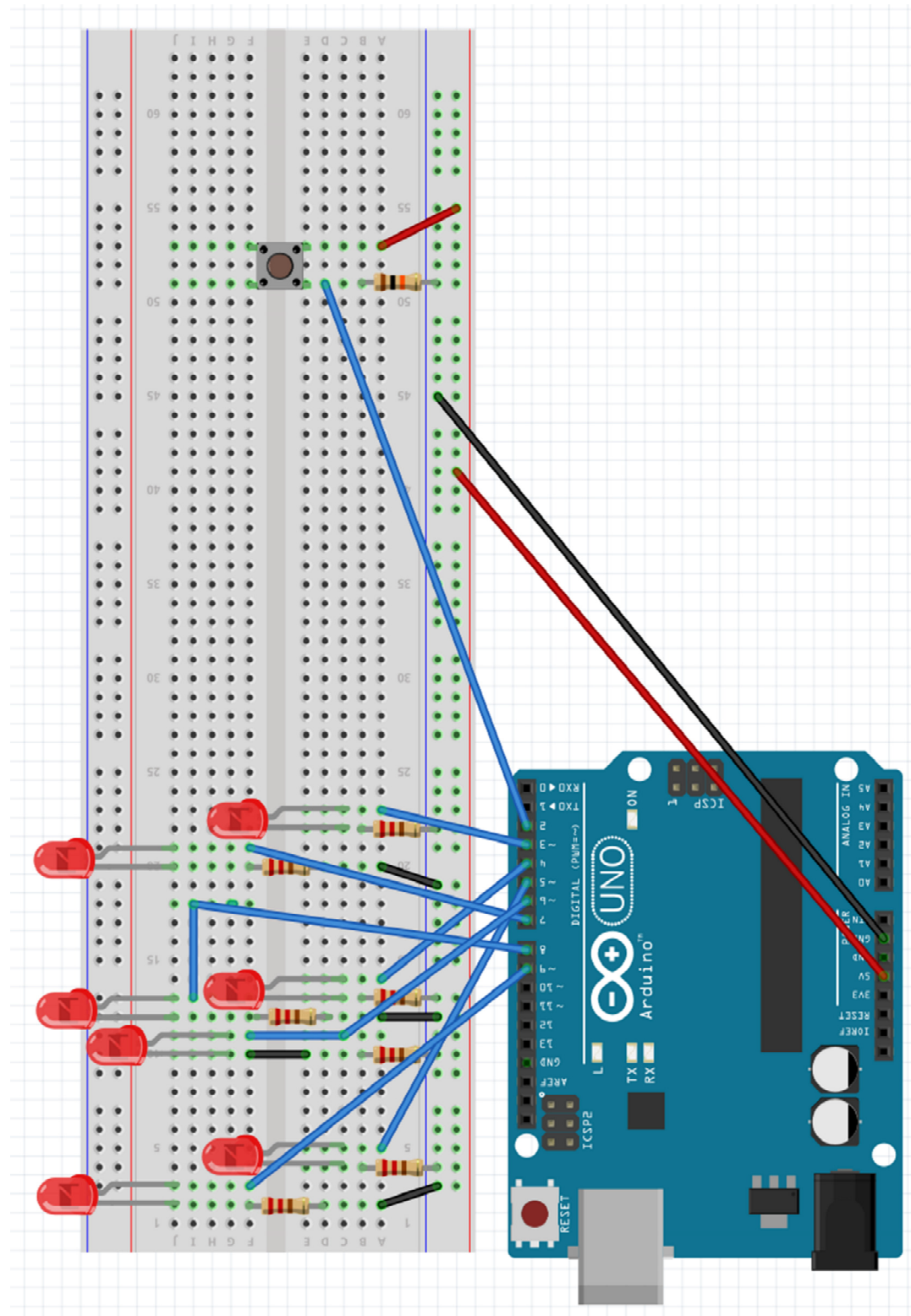# Building a Die Roll Simulator

Building the Circuit

The Code

```
int button = 2;
//LED for DICE
int bottomLeft = 3;
int middleLeft = 4;
int upperLeft = 5;
int middle = 6;
int bottomRight = 7;
int middleRight = 8;
int upperRight = 9;
int state = 0;
long randNumber;


//Initial setup
void setup(){
  pinMode(bottomLeft, OUTPUT);
  pinMode(middleLeft, OUTPUT);
  pinMode(upperLeft, OUTPUT);
  pinMode(middle, OUTPUT);
  pinMode(bottomRight, OUTPUT);
  pinMode(middleRight, OUTPUT);
  pinMode(upperRight, OUTPUT);

  pinMode(button, INPUT);
  Serial.begin(9600);
  randomSeed(analogRead(0));
}

void loop(){
  //Read our button if high then run dice
  if (digitalRead(button) == HIGH && state == 0){
    state = 1;
    randNumber = random(1, 7);
    delay(100);
    Serial.println(randNumber);

    if (randNumber == 6){
      six();
    }
    if (randNumber == 5){
      five();
    }
    if (randNumber == 4){
      four();
    }
```

```
  if (randNumber == 3){
    three();
  }
  if (randNumber == 2){
    two();
  }
  if (randNumber == 1){
    one();
  }
  delay(4000);
  clearAll();
  state = 0;
 }
}

void six()
{
  digitalWrite(bottomLeft, HIGH);
  digitalWrite(middleLeft, HIGH);
  digitalWrite(upperLeft, HIGH);
  digitalWrite(bottomRight, HIGH);
  digitalWrite(middleRight, HIGH);
  digitalWrite(upperRight, HIGH);
}

//Add functions for other numbers one() , two(), three(), four(), and five()

Finally, you will need a clearAll() function

void clearAll()
{
  digitalWrite(bottomLeft, LOW);
  digitalWrite(middleLeft, LOW);
  digitalWrite(upperLeft, LOW);
  digitalWrite(bottomRight, LOW);
  digitalWrite(middleRight, LOW);
  digitalWrite(upperRight, LOW);
  digitalWrite(middle, LOW);
}
```