

```
/* Whack a Mole
```

Simple game where LEDs light up at random and a player has to hit the corresponding button to gain a point. Three LEDs and three buttons are used in this example.

```
*/
```

```
int score = 0; //player's score initialized to 0
```

```
//LED pins
```

```
int led1 = 13;
```

```
int led2 = 12;
```

```
int led3 = 11;
```

```
// the setup routine runs once when you press reset:
```

```
void setup() {
```

```
  // initialize the LED pins as outputs
```

```
  pinMode(led1, OUTPUT);
```

```
  pinMode(led2, OUTPUT);
```

```
  pinMode(led3, OUTPUT);
```

```
  //print score
```

```
  Serial.begin(9600);
```

```
  Serial.println(score);
```

```
}
```

```
// the loop routine runs over and over again forever:
```

```
void loop() {
```

```
  int time = random(0,2000); //random time that the LEDs will be off (the pause)
```

```
  int mole = random(11,14); //random LED that will turn on
```

```
  int sensorValue = 0; //which input pin to read
```

```
  int var = 0;
```

```
  //turn mole off for pause time
```

```
  while(var < time){
```

```
    digitalWrite(mole, LOW); // turn the LED off
```

```
    delay(1); //delay for 1 millisecond
```

```
    var++;
```

```
  }
```

```
  var = 0;
```

```
  //turn mole on for fixed time and read if proper button is being pushed
```

```
  while(var < 500){
```

```
    digitalWrite(mole, HIGH); // turn the LED on
```

```
//depending on which LED is the mole read the corresponding button
if (mole == 13)
{
  sensorValue = analogRead(A2);
}
if (mole == 12)
{
  sensorValue = analogRead(A1);
}
if (mole == 11)
{
  sensorValue = analogRead(A0);
}

//if the correct button is being pushed add to the score and set var
//so that it will exit loop on next iteration
if (sensorValue > 900)
{
  score++;
  var = 500;
}

Serial.println(score); //print new score
delay(1); //delay for one millisecond
var++;
}
digitalWrite(mole, LOW); //turn mole off
}
```