

## Project 16 - LED Dice Code

Copy and Paste the code below into the Arduino sketch window. Verify and upload the code to the board.

```
/*This is a simple project to make LED Dice.*/
```

```
//Defining LED Pins
```

```
int ledPins[7] = {2, 3, 4, 5, 6, 7, 8};
```

```
int dicePatterns[7][7] = {
```

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

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

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

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

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

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

```
{0, 0, 0, 0, 0, 0, 0} // BLANK
```

```
};
```

```
int switchPin = 9; //Defining button pin
```

```
int blank = 6;
```

```
void setup()
```

```
{
```

```
for (int i = 0; i < 7; i++)
```

```
{
```

```
pinMode(ledPins[i], OUTPUT);

digitalWrite(ledPins[i], LOW);

}

randomSeed(analogRead(0));

}

void loop()

{

  if (digitalRead(switchPin))

  {

    rollTheDice();

  }

  delay(100);

}

void rollTheDice()

{

  int result = 0;

  int lengthOfRoll = random(15, 25);

  for (int i = 0; i < lengthOfRoll; i++)

  {

    result = random(0, 6); // result will be 0 to 5 not 1 to 6
```

```
show(result);

delay(50 + i * 10);

}

for (int j = 0; j < 3; j++)

{

show(blank);

delay(500);

show(result);

delay(500);

}

}

void show(int result)

{

for (int i = 0; i < 7; i++)

{

digitalWrite(ledPins[i], dicePatterns[result][i]);

}

}

}
```