Random Numbers

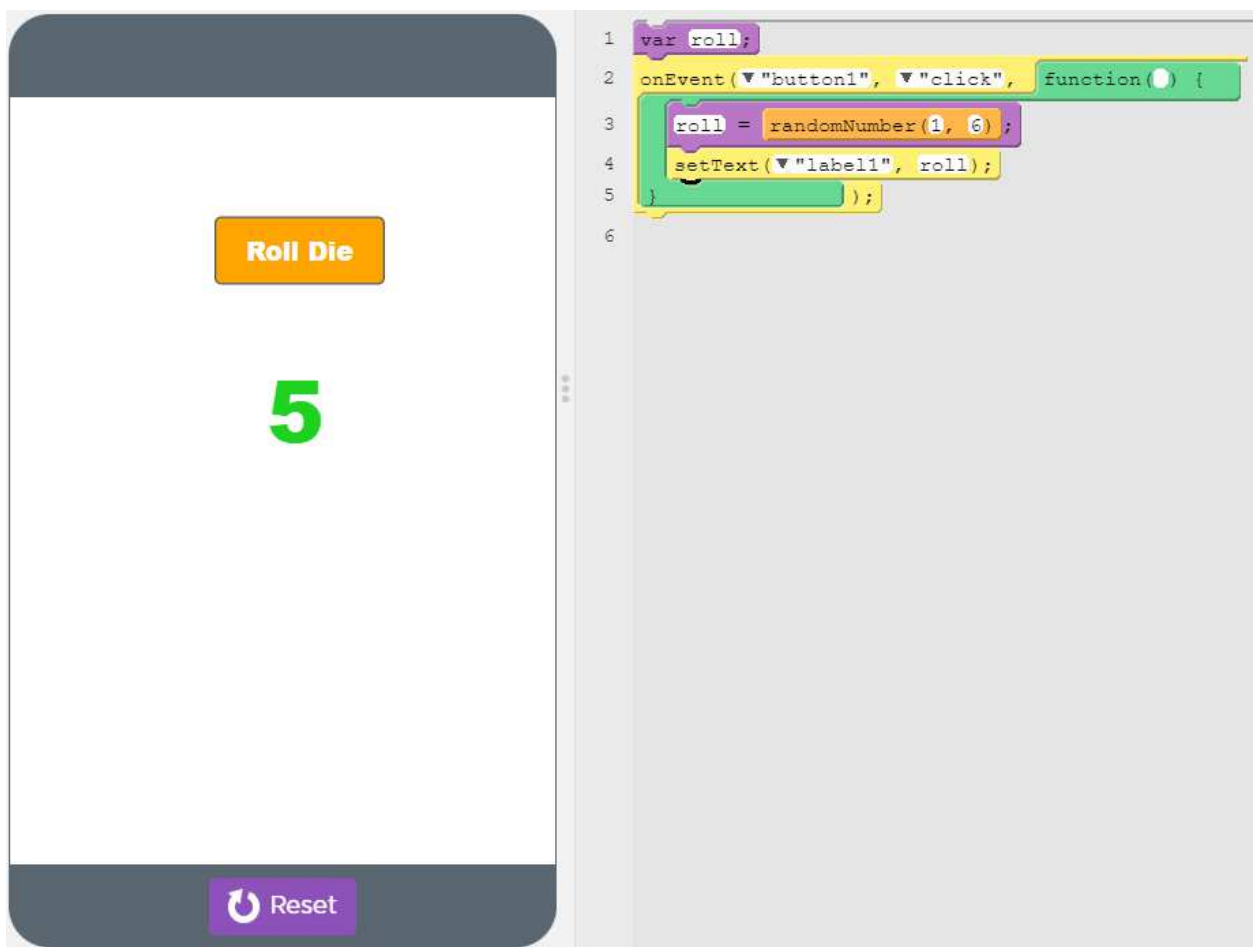## 1. Introduction

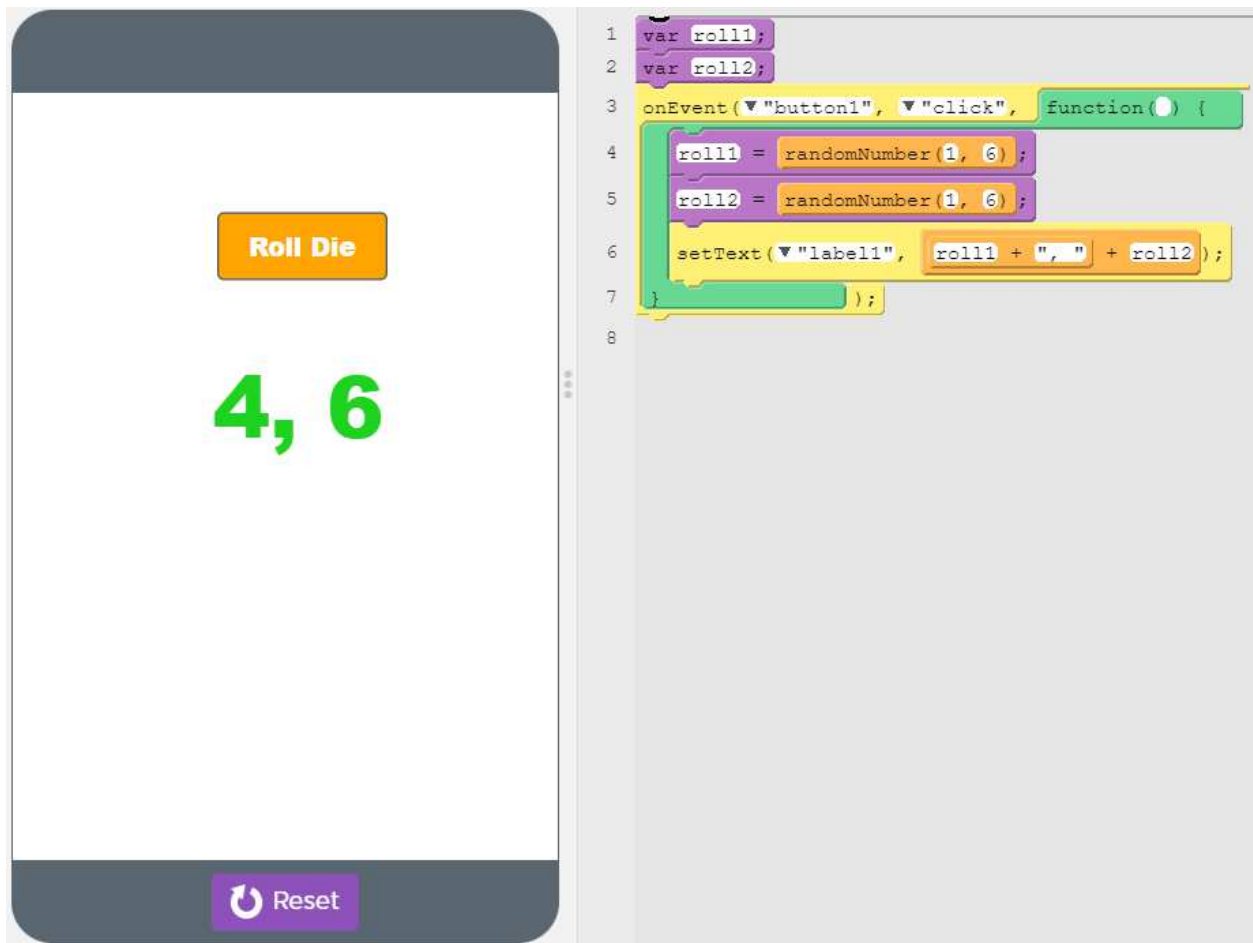Generate random numbers for creating random events.

The randomNumber(minimum, maximum) block command is used to generate a random number between the given minimum and maximum number.
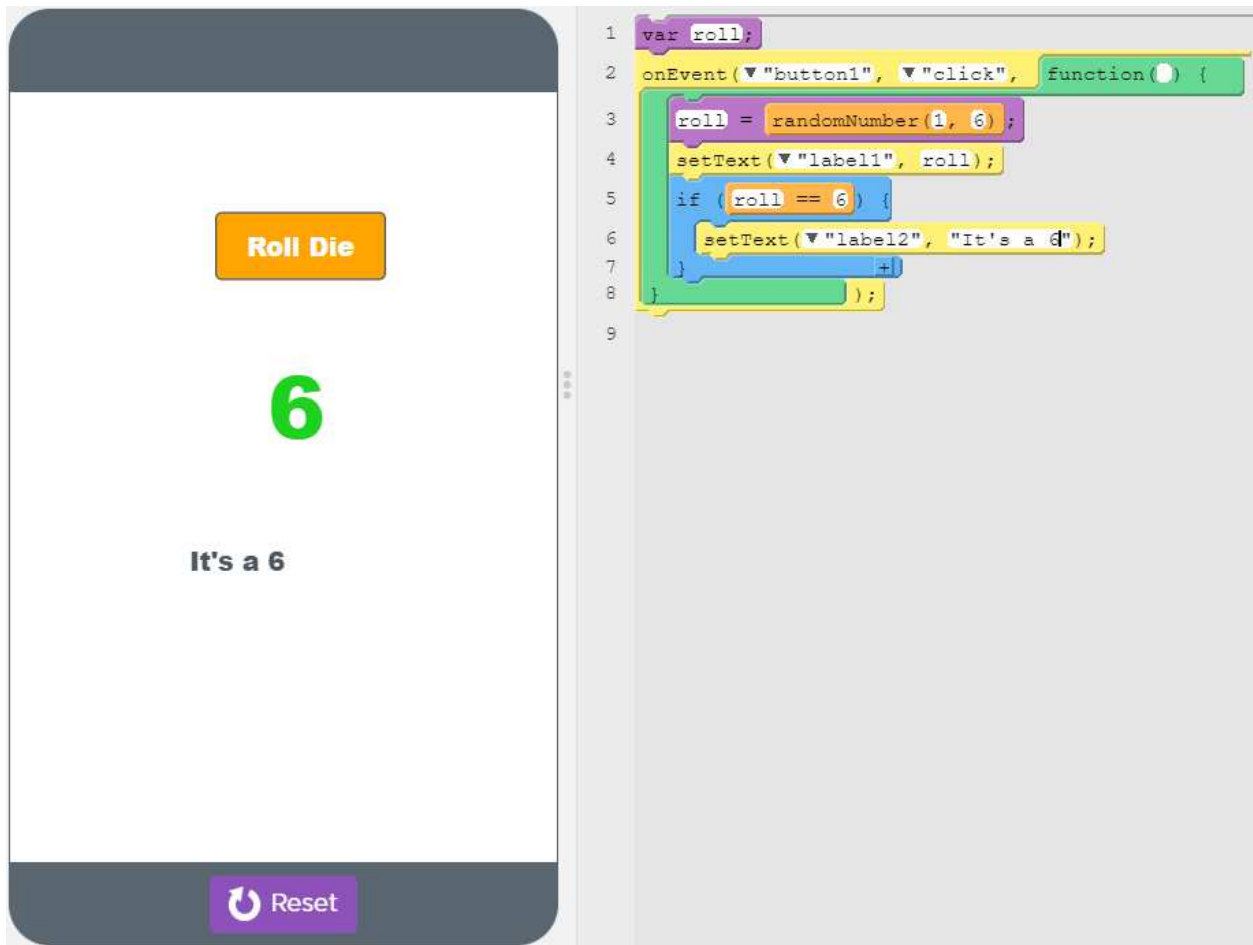
2. Simulate the roll of a die

Simulate the roll of a die.

Simulate the roll of two dice. Two variables are needed to remember the two random numbers.


```
1    var roll1;
2    var roll2;
3    onEvent( ▼"button1", ▼"click", function() {
4        roll1 = randomNumber(1, 6);
5        roll2 = randomNumber(1, 6);
6        setText(▼"label1", roll1 + ", " + roll2);
7    });
8
```

Display the message "It's a 6" when a 6 is rolled.

```
1  var roll;
2  onEvent(▼"button1", ▼"click", function() {
3    roll = randomNumber(1, 6);
4    setText(▼"label1", roll);
5    if (roll == 6) {
6      setText(▼"label2", "It's a 6");
7    }
8  });
9
```

Roll Die

6

It's a 6

Reset

3. *Problems* (Questions with an * are more difficult)

1) Simulate the flip of a coin by generating a random number between 1 and 2. Display the word "Head" if the number is a 1 and "Tail" if it is a 2.

2) Simulate the roll of a die. Display the message "It's a 6" if the number rolled is a 6.

3) Simulate the roll of a die. Display the message "Less than 4" if the number is less than 4.

4) Simulate the roll of two dice. Display the message "Double" when you get a double.

5) Simulate the roll of three dice. Display the message "Two are the same" when two of the numbers are the same.

6) Simulate the roll of three dice. Display the message "Greater than 10" if the sum of the three dice is greater than 10.

7) Generate a random number between 1 and 100. Display the message "Smaller than 50" if the number is smaller than 50.

8) Generate two random numbers in the range from 1 to 100. Display the two numbers in ascending order, i.e., the smaller number followed by the larger number.

9) * Generate a random number between 1 and 100. Display the message "Greater than 40 and less than 60" if the number is greater than 40 and less than 60.

10) * Generate a random number between 1 and 100 to represent the current temperature. Display the message "Too cold" if the temperature number is less than 60. Display the message "Just right" if the temperature is between 60 and 80. Display the message "Too hot" if the temperature is greater than 80.

11) * Generate three random numbers in the range from 1 to 100. Display the three numbers in ascending order, i.e., the smaller number followed by the larger number.