Term 2 Topic 1: Dice!

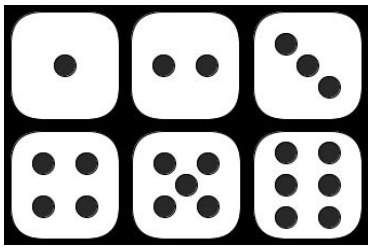
Lesson aim:

To get us back to speed with our programming, and to make a new app while we do that.

Why:

Lots of programs use dice, and it is an interesting exercise to make them. We will also be working hard and quickly this term, so we need to be up to speed with everything from last time around!

> ***Remember to concentrate on getting the small details right: ending lines with a semicolon, matching your brackets carefully, and paying attention to indenting.***



Topics covered in this class:

1. Generating random numbers.
2. Using "`if`" statements.

Task:

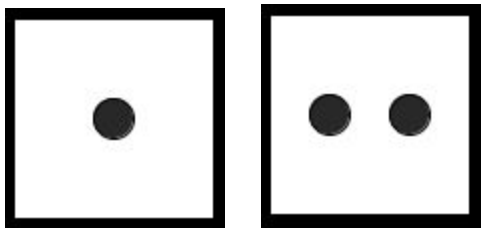
Make a program that shows a simulated dice roll.

- This dice has 6 different "faces" with different numbers of dots on them.
- Every time you start the app it should show a random face - like you had rolled the dice.

Breakdown of steps:

1. Write code to get a random number from 1-6. Remember if you want the random number to be a whole number (1,2, etc) rather than a decimal (1.0001,1.00002 etc) put "`(int)`" in front of the code to get a random number.
    a. Print this to the screen (what function do you use to show text on the screen?)
    b. Run your program multiple times, you should get different numbers.
2. Use a variable (remember them?) to store the random number. This should be set right at the start of running the app (in what ***{codeBlock}*** would that be?).
3. Use an if statement to draw a different face depending on what the number is. A short start is shown below, in the example `randomNumber` is the variable storing the random number:

```
if(randomNumber == 1){
  //draw face with one dot
}
if(randomNumber == 2){
  //draw face with two dots
}
...
```



4. Add in the code to draw the dice in the correct if ***{codeBlock}***. A rectangle with a circle in the middle (like the one above left) or the first face of the dice.
5. Continue writing code for each face, in each if ***{codeBlock}***. For example for side 2 show a rectangle with two circles on it. (Seen above right).

6. Repeat the above steps for the four remaining dice faces (with 3,4,5 and 6 circles on them).