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Introduction

Today and during the next few sessions, you are going to learn some fundamental concepts of coding and learn to read some commands from a new language called javascript.

You need to be able to read and understand javascript in order to build games.

Once we have completed these sessions, you will be able to go for your “Programming Concept” badge.

In today’s session you are going to be learning about:

- Sequencing
- Iterations
- Conditional Statements
- Variables
- How to read code

After lunch you will be asked to produce a simple animation/game in Scratch using the above concepts.

See if you can read the code below and create it in Scratch. To get you started there is a Scratch guide available for you to read – just visit.

REMEMBER - If you get stuck on any of these exercises, ask a Mentor for help. When you have finished the 3 exercises show them to a mentor and explain what is happening in the code.

Exercise 1

<scratch>

function(example1){

var MyName=’’; //Add your name in between ‘ ‘

document.write(MyName);

}

</scratch>

// End Of Code

Hints:
1 - document.write(MyName); in Scratch is either the “think” or “say” blocks under “Looks”.
2 - Words after // in the code are comments, they are there to help you understand the code, there are no comment Scratch blocks.

Exercise 2

Let's add an iteration to the code in Example 1. We will set a counter and increase its value by one for every loop. When the counter reaches your age it will output *your age* as text on the screen.

```
<scratch>
function (example3){
      var MyAge=??; // Replace the ?? with your age
      var Counter=0;
            while (Counter < MyAge){

                  Counter +1;

            }
 document.write(MyAge);

}

</scratch>
```

Do you think that went a bit quick?

How do you think you can slow the iteration down so that you can see the counter increasing slowly?

We could have written that code in another way, but the same Scratch blocks would still be used.

```
<scratch>

var MyAge=??; // Replace the ?? with your age
for (var Counter; Counter<MyAge; Counter++){

}
document.write(MyAge);

</scratch>
```

The *for* loop had all of the information specified in it, note the ++ after Counter. This automatically adds 1 to the previous value of the variable Counter.

In Javascript the *for* loop method reduces the number of lines of code required (makes reading code easier)

Exercise 3

In exercise 2 the loop was empty – it didn't do anything during each pass of the loop.

We need to make it do something, otherwise it is pointless.

To make it do something, you must use the Condition statement – **if**

I want you to make the program do something when it reaches the number 5

```
<scratch>
function(example3){
	var MyAge=??; // Replace the ?? with your age
	for (var Counter; Counter<MyAge; Counter++){
		If (Counter == 5){

		 // you do something here, play a sound/music, switch sprites, it is up to you.

		}


	}
document.write(MyAge);

}

</scratch>
```

What Did You Learn From The Above Examples?

In the above examples you have used some of the fundamental concepts of programming and some javascript code.

Now Show A Mentor Your Scratch Example

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