**Week 10**

* Loops
* Break statement
* Factorials

**Loops**

The most common loops are the for and while loops.

|  |  |
| --- | --- |
| **while** | while (*condition*) {  *code block to be executed*  } |
| **for** | *for (statement 1; statement 2; statement 3) {*  *code block to be executed*  *}* |

Examples:

|  |
| --- |
| var i;  while (i <= 10) {  console.log(i);  i=i+1;  } |
| var i;  for (i = 0; i <= 10; i++) {  console.log(i);  } |

Both loops will count from 0 to 10, but the code is different.

**Break Statement**

|  |  |
| --- | --- |
| var i;  for (i = 0; i < 10; i++) {  if (i === 3) { break; }  text += "The number is " + i;  } | Output:  The number is 0  The number is 1  The number is 2 |

The break statement is used to jump out of a loop. It breaks the loop if the condition is met and executes the code after the loop.

**Solutions for Week 9’s homework:**

<script>

*//*with for loop

function factorial(*num*) {

if (num === 0 || num === 1)

return 1;

for (var i = num - 1; i >= 1; i--) {

num \*= i;

}

return num;

}

console.log(factorial(5));

*//*output is 5\*4\*3\*2\*1=120

</script>

References:

https://www.w3schools.com/js/js\_loop\_while.asp

https://www.w3schools.com/js/js\_loop\_for.asp

https://www.w3schools.com/js/js\_break.asp