Javascript

Conditional Statement

In JavaScript, conditional statement refers to the use of logical structures in code that allow the program to make decisions based on certain conditions.

There are various types of Conditional statement:

- if else
- else if
- switch
- ternery

```
1) if else:Checks if a condition is true runs a block of code
   if condition is false go to else part
    Syntax:
    if(condition){
    code to be executed
    }
    else{
    code to be executed
    }

    example:
    var x=10;
    if (x > 10) {
    console.log("x is greater");
    } else {
    console.log("x is 10 or less");
    }

    output:
    x is 10 or less

2) else if ladder:Allows multiple conditions to be checked in sequence.
    var x=10;
    if (x > 10) {
    console.log("x is greater than 10");
    } else if (x === 10) {
    console.log("x is exactly 10");
    } else {
    console.log("x is less than 10");
    }

    output:
    x is exactly 10

3) switch statement : Useful when evaluating a variable against many possible values.
   syntax:
```

```
var num = ""
 switch(expression) {
 case x:
     // code block
     break;
 case y:
     // code block
     break;
 default:
     // code block
 }

 example:
 const fruit = 'apple';

 switch (fruit) {
     case 'banana':
         console.log("It's a fruit!");
         break;

     case 'egg':
         console.log("egg is not fruit");
         break;

         case 'apple':
             console.log("It's a fruit!");
             break;
     default:
         console.log("Not a fruit.");
 }

 output:
 It's a fruit!
```

4) Ternary operator (? :) A shorthand for simple if...else.

```
syntax:
Variable = (Condition) ? (Statement1) : (Statement2);

example:
var x=10;
let result = (x > 10) ? "Greater than 10" : "10 or less";
console.log(result)

output:
10 or less
```

Looping Statements

These are used when you want to repeat a block of code as long as a specified condition is true.

There are various types of looping statement:

- for
- while
- do while

```
1) for loop:Used when you know in advance how many times to loop.
   syntax:
   for(initalization;condition;inc/dec){
        code to be executed
    }

    i)example:
    for(var i=0;i<5;i++){
    console.log(i);
    }

    output:
    0
    1
    2
    3
    4

    ii)example star code:
    var i,j;
    for (i = 1; i <= 5; i++) {
    var row = '';
    for (j = 1; j <= i; j++) {
        row += '*';
    }
        console.log(row);
    }

    output:
    *
    **
    ***
    ****
    *****

    iii)example multiplication table of any number
    var table =5;
        for (let a = 1; a <= 10; a++) {
            console.log(`${table} x ${a} = ${table * a}`);
        }
```

output:
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50

2) while loop:Used when the number of iterations is not known beforehand
the loop runs as long as the condition is true.

syntax:

```
while(condition){
    code to be executed
    inc or dec
}
```

example:

```
let i = 0;
while (i < 5) {
console.log(i);
i++;
}
```

output:
0
1
2
3
4

3) do...while loop:Like while, but the code block runs at least once,
regardless of the condition.

example:

```
let i = 0;
 do {
 console.log(i);
 i++;
 } while (i < 5);
```

output:
0
1
2
3

Dialog Boxes in js are built-in browser features that allow interaction with the user

There are 3 dialog boxes:

- alert: Used to display a message to the user. It has only an OK button.
- confirm:Displays a message and asks the user to confirm or cancel.
  Returns true if the user clicks OK, and false if they click Cancel.
- confirm:Prompts the user for input and returns the value typed,
  or null if they click Cancel.

example

```
<script>
      //.toLowerCase() : it converts letters to lowercase like AUDI->audi
      var test = prompt("type: mercedes,bmw,audi").toLowerCase();

      switch (test) {
        case "mercedes":
          alert("mercedes is an luxury car");
          break;

        case "bmw":
          alert("its a luxury sport car");
          break;

        case "audi":
          alert("audi D class");
          break;

        default:
          console.log("wrong car");
          confirm("oops wrong car");
      }
</script>
```