

Task 3 - js

- JS Stand for Java Script that could change HTML Content and Style and make your web page dynamic

Where we Write JS Code?

- we can write JS Code between tag in head or body ... or we can use external JavaScript file

What Types in JS and What the difference between them ?

	Updated?	Redeclared?	Scope
var	yes	yes	Function Scope
let	yes	no	Block Scope
const	no	no	Block Scope

```
// Re-assignment
```

```
var x = 5;  
x = 10; // OK
```

```
let y = 5;  
y = 10; // OK
```

```
const z = 5;  
z = 10; // Error
```

```
//Redeclared
```

```
var a = 1;  
var a = 2; // ok
```

```
let b = 1;  
let b = 2; // SyntaxError
```

```
const c = 1;
const c = 2; // SyntaxError
```

```
//Scope
function testVar() {
  if (true) {
    var x = 10;
  }
  console.log(x); // accessible
}
```

```
function testLet() {
  if (true) {
    let y = 20;
  }
  console.log(y); // Error
}

function testConst() {
  if (true) {
    const z = 30;
  }
  console.log(z); // Error
}
```

What is NAN (Not A Number)?

```
let result = 10 / "abc";
console.log(result); // NaN
// cause "abc" can't convert to number

// invalid Math
console.log(0 / 0); // NaN
```

```
console.log(Math.sqrt(-1)); // NaN
```

Other Operation in JS

```
console.log("10" - 5); // 5
console.log("10" * 2); // 20
console.log("10" / 2); // 5
```

- but + perform string concatenation instead of arithmetic addition

```
console.log("10" + 5); // "105"
console.log(5 + "10"); // "510"
// or using Number()
console.log(Number("10") + 5); // 15
```

Different Between == and === ?

- === check if two values are the same or different
- === check if two values and types are the same or different

```
5 === "5"      // true
0 === false    // true
"" === false   // true
null === undefined // true

5 ===="5"     // false
0 ===="false" // false
null ===="undefined" // false

// another ex
```

```
let x = 0;

if (x == false) {
    console.log("True with ==");
}

if (x === false) {
    console.log("True with ===");
}
```