AJAYI HABEEB OLAWALE

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COMPUTER ENGINEERING

300LVL

**SWEP ASSIGMENT 2**

1. var, let, constructor

2. var: Function-scoped, hoisted to the top of the function or global context.

let: Block-scoped, not hoisted to the top of the block, and can be reassigned.

const: Block-scoped, not hoisted, and cannot be reassigned after declaration.

3. Hoisting is a JavaScript behavior where variable and function declaration are moved to the top of their containing scope during the compilation phase, before the code is executed. Variables declared with ‘var’ are hoisted to the top of their scope, but only the declaration are hoisted, not the initializations.

4. var: Yes

let: No,

const: No

5. No, you cannot re-assign the value of a variable declared with const. Const creates a variable whose value cannot be changed after assignment.

6. Global Scope: Variables declared outside of any function are in the global scope. They can be accessed from anywhere in the code.

Function Scope: Variables declared inside a function are in the function scope. They are only accessible within that function.

7. By using either let or const instead of var, you can limit the scope of a variable. Declaring variables inside a function or block will also restrict their accessibility.

8. Advantages:

let and const are blocked-scoped, helping to avoid unintended variable hoisting.

Const enforces immutability for the variable itself.

Disadvantages:

let and const are not hoisted, so they are not available before the declaration.

Const cannot be reassigned, which may be a disadvantage if you need to modify the variable’s value.

9. function myVarFunction() {

if (true) {

var x = 10;

}

console.log(x); //10

}

function myLetfunction() {

if (true) {

let y = 20;

}

console.log(y); //Error: y is not defined

}

10. const PI = 3.14159;

function calcArea(radius) {

return PI \* radius \* radius;

}