**Question 1: Answer the following questions**

1. **Difference between var and let keyword in JavaScript.**

|  |  |  |
| --- | --- | --- |
| **Feature** | **Var** | **Let** |
| **Scope** | Function-scoped | Block-scoped |
| **Hoisting** | Hoisted to the top and initialized with **undefined** | Hoisted to the top but **not initialized** |
| **Re-declaration** | **Allows re-declaration** within the same scope | **Does not allow** re-declaration within the same scope |
| **Global Object Property** | Becomes a property of the global object **if declared globally** | **Does not** become a property of the global object |

1. **Difference between** ''**==**'' **and** ''**===**'' **operators’**

* **== (Equality Operator):** The == operator compares two values for **equality and ignores data type.** Ex: 5 == '5' // true
* **=== (Strict Equality Operator):** The === operator compares two values for **equality and data type.** Ex: 5 === '5' // false

1. **Difference between while and for loop**

* **while Loop:** Used when the **number of iterations is unknown** and depends on a condition.
* **for Loop:** Used when the **number of iterations is known** beforehand.

1. **Difference between if and switch**

* **if Statement:** Used for conditional execution based on **one or more conditions**, allowing for complex conditional logic with multiple else if and else branches.
* **switch Statement:** Used for **selecting one of many code blocks** to be executed based on the value of an expression, making it more readable and efficient when comparing a single variable against many possible values.

**Question 2: What is the output**

1. object
2. 12
3. 10
4. foo – undefined – bar – undefined

5- 16

**Question 3: Write JS Code to solve these problems**

In VS Code

**Question 5:**

1. **Refactor this code by doing it in another two ways 🡪 In VS Code**
2. **Refactor this code using for loop 🡪 In VS Code**
3. **True or False**
4. JavaScript is async, **blocking** and single threaded language **🡪 False**
5. Const arr = [1 , 2 , 3 , 4]

The output of console.log(**typeof(arr)**) will be array **🡪 False**