Control Flow (If-Else, Switch)

Question 1: What is control flow in JavaScript? Explain how if-else statements work with an example.

Answer 1: Control flow is the order in which JavaScript executes your code. It helps the program decide what to do next based on conditions or logic.

**How if-else Works:**

* An **if-else** statement checks a condition. If the condition is **true**, it runs one block of code. If it’s **false**, it runs another block.

**Example:**

let age = 20;

if (age >= 18) {

console.log("You are eligible to vote.");

} else {

console.log("You are not eligible to vote.");

}

**Explanation:**

* **Condition**: age >= 18 checks if age is 18 or more.
* If **true**: It prints "You are eligible to vote."
* If **false**: It prints "You are not eligible to vote."

Question 2: Describe how switch statements work in JavaScript. When should you use a switch statement instead of if-else?

Answer 2: A **switch** statement is used to perform different actions based on different conditions. It compares a value against multiple cases and runs the code for the matching case. If no case matches, it runs the **default** block.

**Syntax:**

switch (expression) {

case value1:

// Code for value1

break;

case value2:

// Code for value2

break;

default:

// Code if no case matches

}

**Example:**

let day = "Monday";

switch (day) {

case "Monday":

console.log("Start of the work week.");

break;

case "Friday":

console.log("End of the work week.");

break;

default:

console.log("It's a regular day.");

}

**Use switch Instead of if-else:**

* Use **switch** when you have **many possible values** to check for the same variable.
* Use **if-else** when checking **ranges** or complex conditions.

**Example:**

* **switch**: Best for checking specific values like day = "Monday".
* **if-else**: Better for conditions like age > 18 && age < 60.