

Js Loops

Conditions in JavaScript

Conditions in JavaScript are used to perform different actions based on different conditions. The most common conditional statements are `if`, `else if`, `else`, and `switch`.

`if`, `else if`, and `else`

```
if (condition1) {  
  // Code to execute if condition1 is true  
} else if (condition2) {  
  // Code to execute if condition1 is false and condition2 is true  
} else {  
  // Code to execute if neither condition1 nor condition2 is true  
}
```

- **if Statement:** Executes a block of code if the specified condition is true.

```
let age = 20;  
  
if (age >= 18) { //return ture  
  console.log("You are an adult.");  
}
```

- **else Statement:** Executes a block of code if the condition in the `if` statement is false.

```
let age = 16;  
  
if (age >= 18) {  
  console.log("You are an adult.");  
} else {
```

```
console.log("You are a minor.");  
}
```

- **else if Statement:** Specifies a new condition to test if the first condition is false.

```
let score = 75;  
  
if (score >= 90) {  
  console.log("Grade A");  
} else if (score >= 80) {  
  console.log("Grade B");  
} else if (score >= 70) {  
  console.log("Grade C");  
} else {  
  console.log("Grade D");  
}
```

switch Statement

The **switch** statement is used to perform different actions based on different conditions. It is often used as an alternative to a series of **if** statements.

```
let day = 3;  
  
switch (day) {  
  case 1:  
    console.log("Monday");  
    break;  
  case 2:  
    console.log("Tuesday");  
    break;  
  case 3:  
    console.log("Wednesday");  
    break;  
  case 4:  
    console.log("Thursday");  
}
```

```
    break;
case 5:
    console.log("Friday");
    break;
case 6:
    console.log("Saturday");
    break;
case 7:
    console.log("Sunday");
    break;
default:
    console.log("Invalid day");
}
```

Question

- Write a program that checks if a person is eligible to vote based on their age. (use if else)
- Write a program that determines the day of the week based on a numeric day value (1-7). (use Switch case)
- Write a program that assigns a letter grade based on a numerical score. (use if, elseif, else)
- Write a program that identifies the season based on the month of the year. (switch or if, elseif, else)
- Write a program that checks if a given number is even or odd. (if condition)
- Write a program that compares two numbers and determines which one is greater, smaller, or if they are equal. (comparison operation with if, else)
- Write a program that assesses the strength of a password based on its length and content. (`/[A-Z]/.test(password) && /[0-9]/.test(password)`)
- Write a program that classifies a person into age groups (Child, Teenager, Adult, Senior) based on their age. (use if else if else)

- **Write a program that determines the weather condition (Hot, Warm, Cool, Cold) based on the temperature. (use if else condition)**
- **Write a program that validates if a given email address contains both "@" and ".". (use email.includes function)**

JavaScript Loops: for, while, do-while, break, and continue