

SELECTION STATEMENTS IN JAVASCRIPT

In JavaScript, the primary statements used for making choices (selection statements) are:

if...else (including else if) and switch.

The **conditional (ternary) operator** also offers a concise way to make a two-way choice.

Here is one example of each type of choice statement:

1. if, else if, and else Statement:

This structure is used to execute different blocks of code based on specific conditions, and it is highly versatile for evaluating a range of possibilities.

```
let score = 85;

if (score > 90) {
    console.log("Grade: A");
} else if (score > 80) {
    console.log("Grade: B");
} else {
    console.log("Grade: C or lower");
}

// Output: Grade: B
```

In this example, the code first checks if `score` is **greater than 90**. Since it's not, it moves to the `else if` block, finds the condition (`score > 80`) to be true, and executes that block.

2. The conditional (ternary) operator:

This is a shorthand syntax for a simple `if...else` statement, ideal for single-line conditional assignments.

It takes three operands: a condition, a result for true, and a result for false.

```
let age = 20;

let legalStatus = (age >= 18) ? "Adult" : "Minor";
console.log(legalStatus);

// Output: Adult
```

The condition `age >= 18` is evaluated. Because it is true, the value "Adult" is assigned to the `legalStatus` variable.

3. Switch Statements:

Switch statements are a good alternative to if/else statements when dealing with a large number of choices.

A Switch statement will contain **case**, **break**, and **default** statements.

```
const day = 3; // Example input (Wednesday)
let dayName;

switch (day) {
  case 0:
    dayName = "Sunday";
    break;
  case 1:
    dayName = "Monday";
    break;
  case 2:
    dayName = "Tuesday";
    break;
  case 3:
    dayName = "Wednesday";
    break;
  case 4:
    dayName = "Thursday";
    break;
  case 5:
    dayName = "Friday";
    break;
  case 6:
    dayName = "Saturday";
    break;
  default:
    dayName = "Invalid input";
}

console.log(dayName); // Output: Wednesday
```

The **break** keyword is essential to prevent "fall-through," which would execute subsequent case blocks even after a match is found.