JavaScript
TUTORIAL

JavaScript switch case

Summary: in this tutorial, you will learn how to use the JavaScript `switch` statement to execute a block of code based on multiple conditions.

Introduction to the JavaScript switch case statement

The `switch` statement evaluates an `expression` , compares its results with `case` values, and executes the statement associated with the matching `case` value.

The following illustrates the syntax of the `switch` statement:

```
switch (expression) {
    case value1:
        statement1;
        break;
    case value2:
        statement2;
        break;
    case value3:
        statement3;
        break;
    default:
        statement;
}
```

How it works.

- First, evaluate the `expression` inside the parentheses after the `switch` keyword.
- Second, compare the result of the expression with the `value1` , `value2` , … in the `case` branches from top to bottom. The `switch` statement uses the strict comparison (`===`).
- Third, execute the statement in the `case` branch where the result of the `expression` equals the value that follows the `case` keyword. The `break` statement exits the `switch` statement. If you omit the `break` statement, the code execution falls through the original case branch into the next one. If the result of the expression does not strictly equal any value, the `switch` statement will execute the `statement` in the `default` branch.

The `switch` statement will stop comparing the `expression` 's result with the remaining case values as long as it finds a match.

The `switch` statement is like the if…else…if statement. But it has more readable syntax.

The following flowchart illustrates the `switch` statement:

In practice, you often use a `switch` statement to replace a complex `if-else-if` statement to make the code more readable.

Technically, the `switch` statement is equivalent to the following `if-else-if` statement:

```
if (expression === value1) {
  statement1;
} else if (expression === value2) {
  statement2;
} else if (expression === value3) {
  statement3;
} else {
  statement;
}
```

JavaScript switch case examples

Let's take some examples of using the JavaScript `switch` statement.

1) Using JavaScript switch statement to get the day of the week

The following example uses the `switch` statement to get the day of the week based on a day number:

```
let day = 3;
let dayName;

switch (day) {
  case 1:
    dayName = 'Sunday';
    break;
  case 2:
    dayName = 'Monday';
    break;
  case 3:
    dayName = 'Tuesday';
    break;
  case 4:
    dayName = 'Wednesday';
    break;
  case 5:
    dayName = 'Thursday';
    break;
  case 6:
    dayName = 'Friday';
    break;
  case 7:
    dayName = 'Saturday';
    break;
  default:
    dayName = 'Invalid day';
}

console.log(dayName); // Tuesday
```

Output:

```
Tuesday
```

How it works.

First, declare the `day` variable that holds the day number and the day name variable (`dayName`).

Second, get the day of the week based on the day number using the `switch` statement. If the day is `1` , the day of the week is `Sunday` . If the day is `2` , the day of the week is `Monday` , and so on.

Third, output the day of the week to the console.

2) Using the JavaScript switch statement to get the day count based on a month

The following example uses the `switch` statement to get the day count of a month:

```
let year = 2016;
let month = 2;
let dayCount;

switch (month) {
  case 1:
  case 3:
  case 5:
  case 7:
  case 8:
  case 10:
  case 12:
    dayCount = 31;
    break;
  case 4:
  case 6:
  case 9:
  case 11:
    dayCount = 30;
    break;
  case 2:
    // leap year
    if ((year % 4 == 0 && !(year % 100 == 0)) || year % 400 == 0) {
      dayCount = 29;
    } else {
      dayCount = 28;
    }
    break;
  default:
    dayCount = -1; // invalid month
}

console.log(dayCount); // 29
```

In this example, we have four cases:

- If the month is 1, 3,5, 7, 8, 10, or 12, the number of days in a month is 31.
- If the month is 4, 6, 9, or 11, the number of days in that month is 30.
- If the month is 2, and the year is not the leap year, the number of days is 28. If the year is the leap year, the number of days is 29.
- If the month is not in the valid range (1-12), the `default` branch executes and sets the `dayCount` variable to -1, which indicates the invalid month.

Summary

- The `switch` statement evaluates an expression, compares its result with `case` values, and execute the statement associated with the matching case.
- Use the `switch` statement rather than a complex `if...else...if` statement to make the code more readable.
- The `switch` statement uses the strict comparison (`===`) to compare the `expression` with the `case` values.

Quiz