

Conditional Statements and Looping in JavaScript

Module 4 - Switch Statement in JavaScript



CBSE

JavaScript Switch case is used to execute a block of statement out of multiple blocks of statements based on a condition. JavaScript switch is a **condition-based statement** that has multiple conditions but executes only one block at a time.



ICSE

In switch statement, the switch expression is **evaluated only once** and then the output is compared with every case mentioned inside the switch block and if the output of expression matches one of the cases then the statement written inside the block of that case is executed. If no case matches then the default case is executed.



NTSE

JavaScript switch case is used in applications where you have to implement a menu like system in which based on user input certain action is taken.



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The switch statement in JavaScript is used to execute one block of code among many options based on a variable or an expression's value. It's a cleaner and more efficient alternative to using multiple if...else if statements when dealing with multiple conditions.



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Syntax of Switch Statement:

```
switch(expression) {  
  case value1:  
    // Code block executed if expression === value1  
    break;  
  case value2:  
    // Code block executed if expression === value2  
    break;  
  // Add more cases as needed  
  default:  
    // Code block executed if no case matches  
}
```



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Key Points

- expression: This is evaluated once and compared with each case.
- case value: The value compared with the expression. If it matches, the corresponding code block executes.
- break: Exits the switch statement to prevent executing subsequent cases.
- default: Optional. Executes if no case matches.



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Introduction to 'JavaScript' Language

Solved Example 1: Display Day of the Week with initializing the variable

Ques: Write a JavaScript program that uses a switch statement to display the day of the week based on the value of a variable day. The program assigns a value to the variable day and determines the corresponding day:

- If the value is 1, display "Monday."
- If the value is 2, display "Tuesday."
- If the value is 3, display "Wednesday."
- If the value is 4, display "Thursday."
- If the value is 5, display "Friday."
- If the value is 6, display "Saturday."
- If the value is 7, display "Sunday."

For any other value, display "Invalid day."
Use document.write to display the output on a webpage.

Solution:

```
<!DOCTYPE html>
<html>
<head>
  <title>Day of the Week</title>
</head>
<body bgcolor="#d3d3f3">
  <script type="text/javascript">
    let day = 3; // Assign the day (Change this value to test other days)

    document.write("<b>Input Day Number:</b> " + day + "<br>");

    switch(day) {
      case 1:
        document.write("<b>Day:</b> Monday");
        break;
      case 2:
        document.write("<b>Day:</b> Tuesday");
        break;
      case 3:
        document.write("<b>Day:</b> Wednesday");
        break;
      case 4:
        document.write("<b>Day:</b> Thursday");
        break;
      case 5:
        document.write("<b>Day:</b> Friday");
```

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```

break;
case 6:
    document.write("<b>Day:</b> Saturday");
    break;
case 7:
    document.write("<b>Day:</b> Sunday");
    break;
default:
    document.write("<b>Day:</b> Invalid day");
}
</script>
</body>
</html>
    
```

OUTPUT:

For the given value day = 3:
Input Day Number: 3
Day: Wednesday

Solved Example 2: Display Day of the Week with user input

Ques : Write a JavaScript program that prompts the user to enter a number (1 to 7) representing the day of the week. The program uses a switch statement to display the day:

- If the user enters 1, display "Monday."
- If the user enters 2, display "Tuesday."
- If the user enters 3, display "Wednesday."
- If the user enters 4, display "Thursday."
- If the user enters 5, display "Friday."
- If the user enters 6, display "Saturday."
- If the user enters 7, display "Sunday."
- For any other value, display "Invalid day."

Use document.write to show the output on a webpage.

Solution:

```

<!DOCTYPE html>
<html>
<head>
    <title>Day of the Week</title>
</head>
<body bgcolor="#d3f3e7">
    
```

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```
<script type="text/javascript">
  // Prompt the user to enter a day number
  let day = prompt("Enter a number (1 to 7) for the day of the week:", "");

  // Convert the input to a number
  day = Number(day);

  document.write("<b>Input Day Number:</b> " + day + "<br>");

  // Use switch statement to determine the day
  switch(day) {
    case 1:
      document.write("<b>Day:</b> Monday");
      break;
    case 2:
      document.write("<b>Day:</b> Tuesday");
      break;
    case 3:
      document.write("<b>Day:</b> Wednesday");
      break;
    case 4:
      document.write("<b>Day:</b> Thursday");
      break;
    case 5:
      document.write("<b>Day:</b> Friday");
      break;
    case 6:
      document.write("<b>Day:</b> Saturday");
      break;
    case 7:
      document.write("<b>Day:</b> Sunday");
      break;
    default:
      document.write("<b>Day:</b> Invalid day");
  }
</script>
</body>
</html>
```

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Input Day Number: 6
Day: Saturday

**Day of the Week when
Number Entered = 6**

Assignment

1. Determine the Month Name

Write a JavaScript program that prompts the user to enter a number between 1 and 12, representing a month of the year. Use a switch statement to display the name of the month:

If the user enters 1, display "January."
If the user enters 2, display "February."
If the user enters 3, display "March."
And so on until 12, for "December."
For any other number, display "Invalid month number."

2. Grade Evaluation

Write a JavaScript program that prompts the user to enter a grade between 1 and 5 representing the evaluation of a student:

If the user enters 1, display "Excellent."
If the user enters 2, display "Good."
If the user enters 3, display "Average."
If the user enters 4, display "Below Average."
If the user enters 5, display "Poor."
For any other number, display "Invalid grade."

3. Calculate Day Type

Write a JavaScript program that prompts the user to enter a number between 1 and 7, representing a day of the week. Use a switch statement to determine if the day is a weekday or a weekend:

If the user enters 1, 2, 3, 4, or 5, display "Weekday."
If the user enters 6 or 7, display "Weekend."
For any other number, display "Invalid day number."

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