

JavaScript Functions and Events

Module 2 - Functions with Conditional Statements in JavaScript



CBSE

A function is a group of reusable code which can be called anywhere in your program. This eliminates the need of writing the same code again and again. It helps programmers in writing modular codes.



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In JavaScript, conditional statements within functions allow us to make decisions based on specific conditions. By combining functions and conditional statements, we can create dynamic, reusable blocks of code that behave differently based on input or program logic.



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Key Points:

**Conditional Statements:**

- if Statement: Executes a block of code if a specified condition is true.
- if...else Statement: Adds an alternative block of code to execute if the condition is false.
- if...else if...else Statement: Allows multiple conditions to be checked in sequence.
- switch Statement: Useful for checking multiple conditions with a specific value.

**Functions:**

Functions are reusable blocks of code that can take inputs (parameters), process them using conditional statements, and return results.

Solved Example 1: Print "Hello" using Functions

**Ques:** Write a Program that uses a function with an if statement in JavaScript to determine if a number is even or odd.

Solution:

```
<!DOCTYPE html>
<html>
<head>
<title>Check Even or Odd</title>
<script>
// Function to check if a number is even or odd
function checkEvenOrOdd(number) {
if (number % 2 === 0) {
return number + " is Even.";
```



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```

    } else {
        return number + " is Odd.";
    }
}

// Taking user input using prompt
let userInput = prompt("Enter a number:");
userInput = parseInt(userInput); // Convert the input to an integer

// Checking if input is a valid number
if (!isNaN(userInput)) {
    // Call the function and display the result
    let result = checkEvenOrOdd(userInput);
    document.write("<h3>" + result + "</h3>");
} else {
    document.write("<h3>Please enter a valid number.</h3>");
}
</script>
</head>
<body bgcolor="#e0f7fa">
    <p>Enter a number in the prompt box, and the program will determine if it is
    even or odd.</p>
</body>
</html>

```

**Explanation:**

**Function Definition:**

The checkEvenOrOdd function takes one parameter, number, and checks if the number is divisible by 2 using the modulus operator (%).

If  $number \% 2 === 0$ , the number is even.  
Otherwise, it is odd.

**User Input:**

The prompt method asks the user to input a number. This input is then converted to an integer using parseInt.

**Input Validation:**

The isNaN function checks if the user entered a valid number. If not, an error message is displayed.

**Function Call:**



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The function is called with the user's input, and the result is displayed using document.write.

Output:

If the user enters 8, the output will be:  
8 is Even.

If the user enters 7, the output will be:  
7 is Odd.

Assignment

**Ques 1: Categorizing Age Groups**

Write a JavaScript function named "categorizeAge" that takes a person's age as input and returns the age group they belong to:

- Child: Age less than 13
- Teenager: Age between 13 and 19 (inclusive)
- Adult: Age between 20 and 59 (inclusive)
- Senior Citizen: Age 60 or above
- Use if...else if...else conditions in the function. Call the function with different age inputs and display the result using document.write().

**Ques 2: Calculate Bonus Based on Years of Service**

Create a function named "calculateBonus" that takes two parameters: salary and yearsOfService.

The function should calculate the bonus as follows:

- If years of service are greater than 10, the bonus is 10% of the salary.
- If years of service are between 5 and 10, the bonus is 7% of the salary.
- If years of service are less than 5, the bonus is 5% of the salary.
- The function should return the calculated bonus. Use if...else if...else statements. Prompt the user for salary and years of service, call the function, and display the bonus using document.write().

**Ques 3: Determine Triangle Type**

Write a function named "determineTriangleType" that takes three parameters: side1, side2, and side3.

Use conditional statements to determine the type of triangle:

- Equilateral: All sides are equal.
- Isosceles: Exactly two sides are equal.

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- Scalene: All sides are different.
- The function should return the type of triangle. Call the function with sample side lengths and display the output using console.log().

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