

Lecture-03: Nested If and Loop in JavaScript

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Nested If:

In a nested if, there is an additional if statement inside another if statement.

```
<script>
  var age = prompt("Enter Your Age");

  if (age <= 18) {
    // Taking input for 14 subjects
    // Calculating total marks and percentage
    // Printing grade based on percentage
  }
</script>
```

Loop:

A loop is used for repetitive tasks. It repeats a set of instructions until a specific condition is met.

Types of Loops:

1. Pre Level:
 - do-while
2. Post Level:
 - for
 - while

Example of Post Level "for" Loop:

```
<script>

    for (var i = 0; i <= 10; i++) {
        document.write("Khuzaima Ahmed<br>");
    }
</script>
```

In this example, the loop will print "Khuzaima Ahmed" ten times, as the value of i increments from 0 to 10.

Leap Year Program:

A program to find leap years between 2001 and 2023 and count the total leap years.

```
<script>
    var count = 0;

    for (var i = 2001; i <= 2023; i++) {
        if (i % 4 === 0) {
            count++;
            document.write("Leap Year " + i + "<br>");
        } else {
            document.write("Not a Leap Year " + i + "<br>");
        }
    }

    document.write("Total Leap Year Counts = " + count);
</script>
```

In this program, the loop checks each year between 2001 and 2023 to see if it's a leap year or not. It prints the result for each year and counts the total leap years.

Remember, loops help reduce manual effort and make repetitive tasks more manageable.