# Lecture-04: “for” Loop in JavaScript

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## Introduction to For Loop:

* The "for" loop is used for executing a block of code repeatedly until a specified condition is met.
* It consists of three parts: initialization, condition, and increment/decrement.

### Syntax:

        for (initialization; condition; increment / decrement) {

            // Code to be executed

        }

### Dynamic Program with For Loop:

        let name = ["Khuzaima", "Huzaifa", "Afzal", "Shoaib", "Hafiz Yousuf", "Abdul Rafay", "Muneeb Hassan", "Misbah", "Sana Kiran", "Kashaf", "Kinza"];

        for (var i = 0; i < name.length; i++) {

            document.write("Student Name = " + name[i] + "<br>");

        }

In this example, the loop iterates through the "name" array and prints each student's name one by one.

### Countdown Program with For Loop:

        for (var k = 10; k >= 1; k--) {

            document.write(k + "<br>");

        }

In this program, the loop starts from 10 and counts down to 1, printing each value in reverse order.

### Looping through Multiple Arrays:

        var array1 = [1, 2, 3, 4, 5];

        var array2 = [10, 20, 30, 40, 50];

        var array3 = [100, 200, 300, 400, 500];

        for (var i = 0; i < array1.length; i++) {

            document.write("Array1: " + array1[i] + ", Array2: " + array2[i] + ", Array3: " + array3[i] + "<br>");

        }

In this example, the loop iterates through all three arrays simultaneously, displaying corresponding elements in each iteration.

### Iteration Terminology:

* The first iteration has an index of 0.
* The second iteration has an index of 1, and so on.

Remember, you can use "for" loops to iterate through arrays, perform repetitive tasks, and simplify your code.