



جامعة المستقبل  
AL MUSTAQBAL UNIVERSITY

## كلية العلوم قسم الانظمة الطبية الذكية

### Lecture: (12)

#### ❖ Looping And Iteration Part I

**Subject: Computer Programming (I)**

**Level: First**

**Lecturer: Dr. Maytham N. Meqdad**



## Java For Loop

When you know exactly how many times you want to loop through a block of code, use the `for` loop instead of a `while` loop:

### Syntax

```
for (statement 1; statement 2; statement 3) {  
    // code block to be executed  
}
```

**Statement 1** is executed (one time) before the execution of the code block.

**Statement 2** defines the condition for executing the code block.

**Statement 3** is executed (every time) after the code block has been executed.

The example below will print the numbers 0 to 4:

```
public class Main {  
    public static void main(String[] args) {  
        // Loop from 0 to 4  
        for (int i = 0; i < 5; i++) {  
            System.out.println(i); // Print the current value of i  
        }  
    }  
}
```

Output :

0  
1  
2  
3  
4



- This example will only print even values between 0 and 10:

```
public class Main {  
    public static void main(String[] args) {  
        for (int i = 0; i <= 10; i = i + 2) {  
            System.out.println(i);  
        }  
    }  
}
```

- This program iterates from 1 to 100 using a for loop, adding each number to the sum variable. Finally, it prints out the sum of all numbers from 1 to 100.

```
public class SumNumbers {  
    public static void main(String[] args) {  
        int sum = 0;  
  
        for (int i = 1; i <= 100; i++) {  
            sum += i;  
        }  
  
        System.out.println("The sum of numbers from 1 to 100 is: " + sum);  
    }  
}
```

-  
-  
-  
-  
-  
-  
-  
-  
-  
-  
-



- Java program that calculates the average of 6 marks entered by the user using a for loop:

```
import java.util.Scanner;

public class AverageMarks {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int totalMarks = 0;

        System.out.println("Enter the marks for 6 subjects:");

        // Input marks for 6 subjects
        for (int i = 1; i <= 6; i++) {
            System.out.print("Enter marks for subject " + i + ": ");
            int marks = scanner.nextInt();
            totalMarks += marks;
        }

        // Calculate average
        double average = (double) totalMarks / 6;

        // Display the average
        System.out.println("The average marks of the student is: " +
            average);

        scanner.close();
    }
}
```

---