

## Iteration (Looping)

### For Example:

```
// Program to print numbers from 1 to 5

class Main {
    public static void main(String[] args) {

        int n = 5;
        // for loop
        for (int i = 1; i <= n; ++i) {
            System.out.println(i);
        }
    }
}
```

### While Example:

```
// Program to display numbers from 1 to 5

class Main {
    public static void main(String[] args) {

        // declare variables
        int i = 1, n = 5;

        // while loop from 1 to 5
        while(i <= n) {
            System.out.println(i);
            i++;
        }
    }
}
```

### Do While Example:

```
// Java Program to display numbers from 1 to 5

import java.util.Scanner;

// Program to find the sum of natural numbers from 1 to 100.

class Main {
    public static void main(String[] args) {

        int i = 1, n = 5;
```

```
// do...while loop from 1 to 5
do {
    System.out.println(i);
    i++;
} while(i <= n);
}
```

### **Program 1 – Odd or Even**

Write a program to allow the user to enter 5 numbers. Output whether each number is odd or even

### **Program 2 – Find the Average**

Write a program asking the user to enter 10 numbers. Output the total of the numbers and the average of the numbers.

### **Program 3 – Exam marks**

Ask the user to enter as many exam marks as they wish and enter Q (To Quit) when all marks are entered. Then output the total of the marks and the average mark.

### **Program 4 – Bookshop**

A bookshop wants a program that allows a sales assistant to enter the prices for a number of books and calculate their total cost. The program must first ask the assistant to enter the number of books then the program should ask them to enter the price of each book. Finally, the total cost should be displayed.

### **Program 5 – Times Table**

Output the Times table for a range of tables:

Input:

Table Number from

Table Number to

Processing and output:

Output the Times table (1-12) for each table in the range entered.