

# SET 1

1. Write a for loop that prints the even numbers from 1 to 20.

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

    System.out.println("Even numbers from 1 to 20:");

    for (int i =
1; i <= 20; i++)
{        if (i %
2 == 0) {
            System.out.println(i);
        }
    }
}
```

o\p= Even numbers from 1 to 20:

2  
4  
6  
8  
10  
12  
14  
16  
18  
20

**2.Create a while loop that prompts the user for their flight choice until a valid number is entered.**

```
import java.util.Scanner;

public class FlightChoice {
    public static void main(String[] args) {
        Scanner scanner = new
        Scanner(System.in);
        int flightNumber = -1; // Initialize to an
        invalid value

        while (flightNumber <= 0) {
            System.out.print("Enter a valid flight number (positive number): ");
            if (scanner.hasNextInt()) { // Check if the input is an
integer
                flightNumber = scanner.nextInt();
                if (flightNumber > 0) {
                    System.out.println("You entered a valid flight number: " +
flightNumber);
                } else {
                    System.out.println("Invalid flight number. Please enter a
positive number.");
                }
            } else {
                System.out.println("Invalid input. Please enter a numeric value.");
                scanner.next(); // Consume invalid input
            }
        }
        scanner.close();
    }
}
```

0\np= Enter a valid flight number (positive number): 123  
You entered a valid flight number: 123

|    |   |
|----|---|
| 4. | <b>Write a Java program that uses a for loop to print the first 10 numbers of the Fibonacci sequence.</b> |
|----|---|

```
public class FibonacciSequence {
```

```

    public static void
main(String[] args) {
    int first = 0, second = 1;

    System.out.println("The first 10 numbers of the Fibonacci sequence are:");
    for (int i = 1; i <= 10; i++) {
        System.out.print(first + " "); // Print the current
Fibonacci number

        int next = first + second; // Calculate the next
number

        first = second; // Update first

        second = next; // Update second

    }
}
}

o\p= The first 10 numbers of the Fibonacci sequence are:
0 1 1 2 3 5 8 13 21 34

```

|    |   |
|----|---|
| 5. | <b>Create a Java program using a while loop to calculate the sum of integers from 1 to 100.</b> |
|----|---|

```

public class SumFrom1To100 {
    public static void main(String[] args) {
        int sum = 0; // Variable to store the sum
        int number = 1; // Starting number

        // While loop to calculate the sum
        while (number <= 100) {
            sum += number; // Add the current number to the sum
            number++; // Increment the number
        }
    }
}

```

```
        // Print the result
        System.out.println("The sum of integers from 1 to 100 is: " + sum);
    }
}
```

**6. java program for calculate the sum pf the 5 natural number and print the result**

```
public class SumOfFiveNaturalNumbers {
    public static void main(String[] args) {
        int sum = 0; // Variable to store the sum

        // Loop to calculate the sum of the first 5 natural numbers
        for (int i = 1; i <= 5; i++) {
            sum += i; // Add the current number to the sum
        }

        // Print the result
        System.out.println("The sum of the first 5 natural numbers is: " + sum);
    }
}
```

## SET 6

### 1. java program to reverse a String Buffer initialized with "Java Programming"

```
public class ReverseStringBuffer {
    public static void main(String[] args)
    {
        // Initialize the StringBuffer
        StringBuffer sb = new
StringBuffer("Java Programming");

        // Reverse the StringBuffer
        sb.reverse();

        // Print the reversed StringBuffer
        System.out.println("Reversed
StringBuffer: " + sb);
    }
}
```

|    |  |
|----|--|
| 2. | <b>Create a method that deletes the substring "World" from a StringBuffer initialized with "Hello World". Print the modified StringBuffer.</b><br><b>Input: "Hello World"</b><br><b>Output: "Hello "</b> |
|----|--|

```
public class
DeleteWorld {    public
static
voidmain(String[] args)
{
StringBuffer stringBuffer = new StringBuffer("Hello World");
stringBuffer.delete(6, 11);

System.out.println("Modified StringBuffer: " + stringBuffer);
```

```
}  
}
```

o/p =

Modified StringBuffer: Hello

|    |  |
|----|--|
| 3. | Write a Java program that replaces "Java" with "Python" in a StringBuffer initialized with "I love Java programming".<br>Input: "I love Java programming"<br>Output: "I love Python programming" |
|----|--|

```
54      public class  
ReplaceString {  
    public static void  
    main(String[] args) {  
        StringBuffer stringBuffer = new StringBuffer("I love  
Java programming");  
        int start = stringBuffer.indexOf("Java");    int end =  
start + "Java".length();  
        if (start != -1) {  
            stringBuffer.replace(start, end, "Python");  
        }  
        System.out.println("After replacement: " + stringBuffer);  
    }  
}
```

o/p = After replacement: I love Python programming

4. simple java code for simple **banking system** where user can deposit and withdraw money until they choose to exit.

```
import java.util.Scanner;

public class SimpleBankingSystem {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        double balance = 0.0; // Initial balance

        boolean exit = false;

        System.out.println("Welcome to Simple Banking System!");

        while (!exit) {

            // Display menu

            System.out.println("\nChoose an option:");

            System.out.println("1. Deposit Money");

            System.out.println("2. Withdraw Money");

            System.out.println("3. Check Balance");

            System.out.println("4. Exit");

            // Get user choice

            System.out.print("Enter your choice: ");

            int choice = scanner.nextInt();

            switch (choice) {

                case 1: // Deposit money

                    System.out.print("Enter the amount to deposit: ");

                    double depositAmount = scanner.nextDouble();
```

```
        if (depositAmount > 0) {  
            balance += depositAmount;  
            System.out.println("Successfully deposited: $" +  
depositAmount);  
        } else {  
            System.out.println("Invalid amount. Please try  
again.");  
        }  
        break;
```

```
case 2: // Withdraw money  
    System.out.print("Enter the amount to withdraw:  
");  
    double withdrawAmount = scanner.nextDouble();  
    if (withdrawAmount > 0 && withdrawAmount <=  
balance) {  
        balance -= withdrawAmount;  
        System.out.println("Successfully withdrawn: $"  
+ withdrawAmount);  
    } else {  
        System.out.println("Insufficient funds or invalid  
amount.");  
    }  
    break;
```

```
case 3: // Check balance  
    System.out.println("Your current balance is: $" +  
balance);  
    break;
```

```
case 4: // Exit
```



```
        System.out.println("Thank you for using Simple  
Banking System. Goodbye!");
```

```
        exit = true;
```

```
        break;
```

```
        default: // Invalid choice
```

```
        System.out.println("Invalid choice. Please try  
again.");
```

```
    }
```

```
}
```

```
    scanner.close(); // Close the scanner
```

```
}
```

```
}
```

##### **5. simple java code for to demonstrate the use of unary increment(++)and decrement(--) operators**

```
public class UnaryOperatorsDemo {
```

```
    public static void main(String[] args) {
```

```
        int number = 10;
```

```
        System.out.println("Initial value: " + number);
```

```
        // Pre-increment: Increment first, then use the value
```

```
        System.out.println("Pre-increment: " + (++number)); //  
number becomes 11
```

```
        // Post-increment: Use the value first, then increment
```

```
System.out.println("Post-increment: " + (number++)); //  
prints 11, then number becomes 12
```

```
System.out.println("Value after post-increment: " +  
number); // prints 12
```

```
// Pre-decrement: Decrement first, then use the value
```

```
System.out.println("Pre-decrement: " + (--number)); //  
number becomes 11
```

```
// Post-decrement: Use the value first, then decrement
```

```
System.out.println("Post-decrement: " + (number--)); //  
prints 11, then number becomes 10
```

```
System.out.println("Value after post-decrement: " +  
number); // prints 10
```

```
}
```

```
}
```