

## **Input and Output Statements in Java**

### **Aim:**

To understand and use input and output statements in Java using the Scanner class.

### **PRE LAB EXERCISE**

#### **QUESTIONS**

What is input in a program?

Ans: Input is a information we give to a program.

What is output in a program?

Ans: Output is the result that the program gives back.

Which class is used to read input from the user in Java?

Ans: Scanner class is used to take input from the user.

### **IN LAB EXERCISE**

#### **Objective:**

To read input from the user and display the output using Java input and output statements.

#### **INPUT STATEMENT:**

#### **SCANNER CLASS**

- ✓ The Scanner class in Java is used to read input from the user through the keyboard. It is available in the package java.util.
- ✓ The Scanner object reads different types of input such as integer, float, double, and string and stores them in variables.
- ✓ To use the Scanner class, it must be imported before using it in the program.

#### **SYNTAX:**

- ✓ `Scanner sc = new Scanner(System.in);`

#### **Commonly Used Scanner Methods:**

- ✓ `nextInt()` – reads an integer value
- ✓ `nextFloat()` – reads a float value
- ✓ `nextDouble()` – reads a double value

- ✓ next() – reads a single word
- ✓ nextLine() – reads a complete line of text

## PROGRAMS:

### Program 1: Read and Display Name

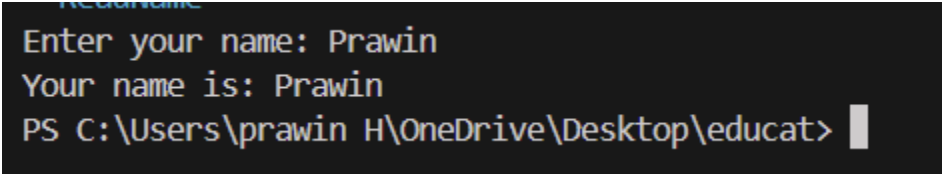
#### Source Code:

```
import java.util.Scanner;

class ReadName {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter your name: ");
        String name = sc.nextLine();
        System.out.println("Your name is: " + name);
    }
}
```

#### Output:



```
Enter your name: Prawin
Your name is: Prawin
PS C:\Users\prawin H\OneDrive\Desktop\educat>
```

### Program 2: Read Two Numbers and Print Sum

#### Source Code:

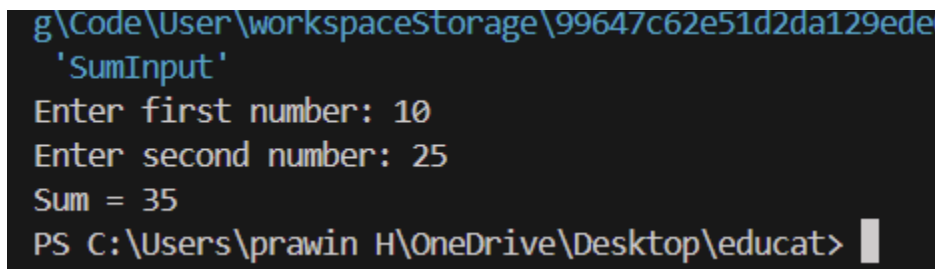
```
import java.util.Scanner;

class SumInput {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter first number: ");
        int a = sc.nextInt();
```

```
System.out.print("Enter second number: ");  
int b = sc.nextInt();  
int sum = a + b;  
System.out.println("Sum = " + sum);  
}  
}
```

**Output:**



```
g\Code\User\workspaceStorage\99647c62e51d2da129ede  
'SumInput'  
Enter first number: 10  
Enter second number: 25  
Sum = 35  
PS C:\Users\prawin H\OneDrive\Desktop\educat>
```

**Program 3: Read Length and Breadth and Find Area of Rectangle**

**Source Code:**

```
import java.util.Scanner;  
  
class AreaRectangleInput {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        System.out.print("Enter length: ");  
        int length = sc.nextInt();  
        System.out.print("Enter breadth: ");  
        int breadth = sc.nextInt();  
        int area = length * breadth;  
        System.out.println("Area of Rectangle = " + area);  
    }  
}
```

**Output:**

```

g\code\user\workspace\storage\99047c02e5102da
'AreaRectangleInput'
Enter length: 9
Enter breadth: 8
Area of Rectangle = 72
PS C:\Users\pravin H\OneDrive\Desktop\educat

```

## POST LAB EXERCISE

- ✓ What is the use of the Scanner class in Java?  
Ans: It is used to input from the user.
- ✓ Which package contains the Scanner class?  
Ans: java.util package
- ✓ What does System.in represent?  
Ans: It is used to input from the keyboard.
- ✓ What does System.out represent?  
Ans: It is used to display output on the screen.
- ✓ Name any two methods used to read input using Scanner.  
Ans: nextInt() and nextLine().
- ✓ What is the difference between next() and nextLine()?  
Ans: next() reads only one word.  
nextLine() reads the whole line.

## Result:

Thus the input was successfully read from the user and the corresponding output was displayed using Java input and output statements.

## ASSESSMENT

Description	Max Marks	Marks Awarded
Pre Lab Exercise	5	
In Lab Exercise	10	
Post Lab Exercise	5	
Viva	10	
<b>Total</b>	<b>30</b>	
<b>Faculty Signature</b>		