Experiment Number : 02 **Date: 26/01/2026**

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?

Input is the data provided to a program for processing.It is required for the program to perform operations.Input can be given by the user or from external sources.Without input, meaningful output cannot be produced.

What is output in a program?

Output is the result generated after processing the input.It shows the outcome of the program's operations.Output is usually displayed on the screen.It can also be stored in files or databases.

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

The Scanner class is used to read input from the user in Java.It belongs to the java.util package.It can read different data types like int, float, and string.It takes input from sources like the keyboard.

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:

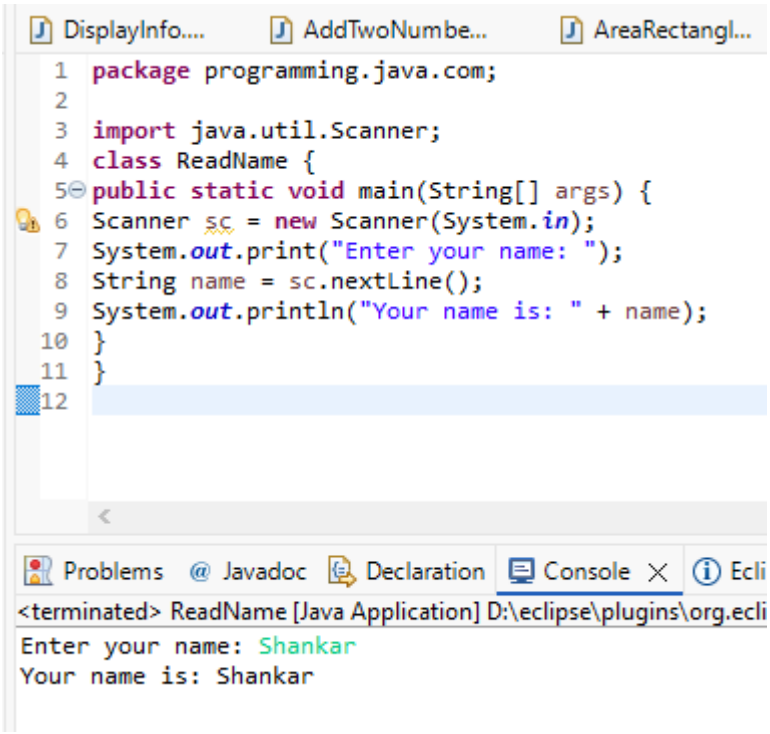
Program 1: Read and Display Name

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: Shankar
Your name is: Shankar
```



Program 2: Read Two Numbers and Print Sum

Source Code:

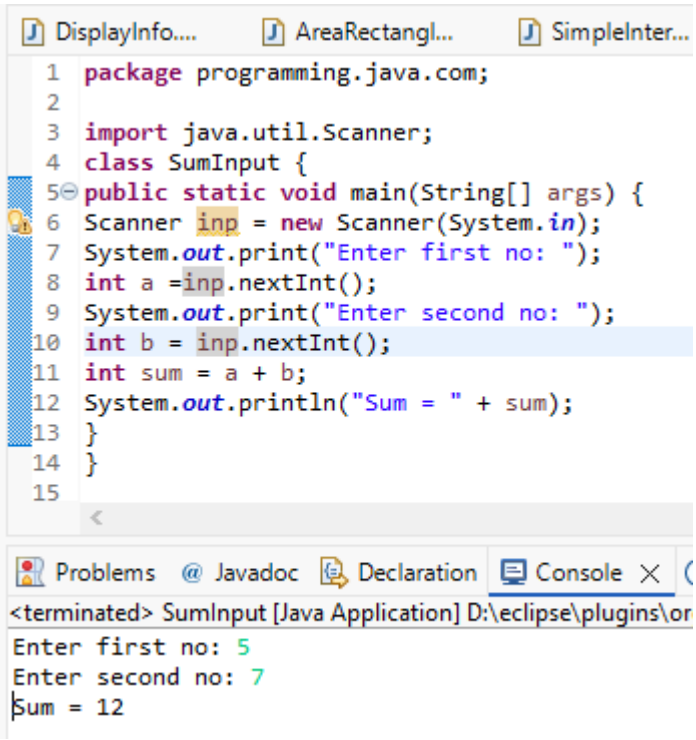
```
import java.util.Scanner;

class SumInput {

public static void main(String[] args) {

Scanner inp = new Scanner(System.in);

System.out.print("Enter first number: ");

int a = inp.nextInt();

System.out.print("Enter second number: ");

int b = inp.nextInt();

int sum = a + b;

System.out.println("Sum = " + sum);

}

}
```

Output:

Enter first number: 5

Enter second number: 7

Sum = 12



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);
```

}

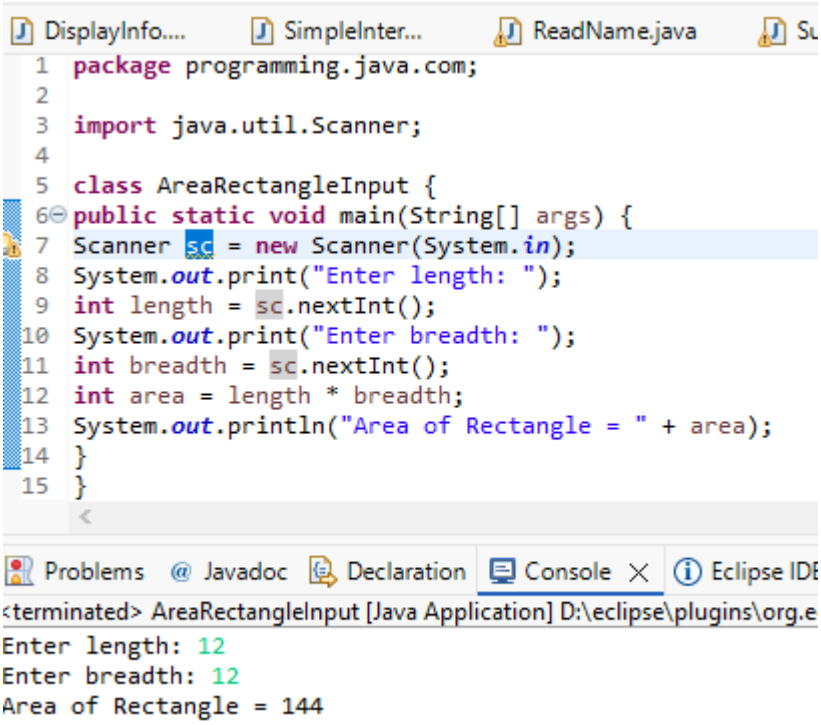
}

Output:

Enter length: 12

Enter breadth: 12

Area of Rectangle = 144



POST LAB EXERCISE

- ✓ What is the use of the Scanner class in Java?
  The Scanner class is used to read input from the user.It can read different types of data such as integers, floats, and strings.It simplifies input handling in Java programs.

- ✓ Which package contains the Scanner class?
  The Scanner class is present in the java.util package.This package provides utility classes for data handling.It must be imported before using Scanner.

- ✓ What does System.in represent?

System.in represents the standard input stream.It is used to take input from the keyboard. Scanner uses System.in to read user input.

- ✓ What does System.out represent?
  System.out represents the standard output stream. It is used to display output on the screen. Methods like print() and println() use System.out.

- ✓ Name any two methods used to read input using Scanner.
  nextInt() is used to read integer input.
  nextLine() is used to read a full line of text.
  Other methods include nextDouble() and next().

- ✓ What is the difference between next() and nextLine()?
  next() reads input only until a space is encountered.
  nextLine() reads the entire line including spaces.
  nextLine() moves the cursor to the next line after reading.

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**	
Total	**30**	
	Faculty Signature	