

Day 05 – Taking User Input in Java (Detailed)

In real-world applications, programs must interact with users. Java allows us to take input from the user using different techniques. This chapter explains user input in Java word by word with multiple examples.

1. What is User Input?

User input means taking data from the user while the program is running. Instead of hard-coded values, the user provides values using the keyboard.

2. Scanner Class in Java

Scanner is a predefined class in Java used to read input from different sources. For keyboard input, we use System.in.

Package: java.util.Scanner

Steps to use Scanner class

- Import Scanner class using import java.util.Scanner;
- Create Scanner object using new Scanner(System.in);
- Call appropriate Scanner methods to read input
- Close Scanner after use

3. Program 1: Taking Integer Input

This program takes age as input from the user and prints it.

```
import java.util.Scanner;
class AgeInput {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter your age: ");
        int age = sc.nextInt();
        System.out.println("Your age is: " + age);
        sc.close();
    }
}
```

4. Program 2: Taking String Input

This program takes name as input and prints a greeting message.

```
Scanner sc = new Scanner(System.in);
System.out.print("Enter your name: ");
String name = sc.nextLine();
System.out.println("Welcome " + name);
```

5. Program 3: Taking Multiple Inputs

This program takes name, age and marks from the user.

```
Scanner sc = new Scanner(System.in);
System.out.print("Enter name: ");
String name = sc.nextLine();
System.out.print("Enter age: ");
int age = sc.nextInt();
System.out.print("Enter marks: ");
float marks = sc.nextFloat();
System.out.println(name + " " + age + " " + marks);
```

6. Common Scanner Methods

| Method | Description |
|--------------|---------------------|
| nextInt() | Reads integer input |
| nextFloat() | Reads float input |
| nextDouble() | Reads double input |
| next() | Reads single word |
| nextLine() | Reads entire line |

7. Common Mistakes

- Using `nextLine()` after `nextInt()` without clearing buffer
- Forgetting to import `Scanner` class
- Not closing `Scanner` object

Conclusion

Taking user input is a fundamental concept in Java programming. Mastering `Scanner` class helps in building interactive and real-world applications.