



Vidyavardhini's College of Engineering and Technology
Department of Artificial Intelligence & Data Science

Experiment No.2
Accepting Input Through Keyboard
Date of Performance:
Date of Submission:



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Aim: To apply basic programming for accepting input through keyboard.

Objective: To use the facility of java to read data from the keyboard for any program

Theory:

Java brings various Streams with its I/O package that helps the user perform all the Java input-output operations. These streams support all types of objects, data types, characters, files, etc. to fully execute the I/O operations. Input in Java can be with certain methods mentioned below in the article.

Methods to Take Input in Java

There are two ways by which we can take Java input from the user or from a file

1. `BufferedReader` Class
2. `Scanner` Class

Using `BufferedReader` Class for String Input In Java

It is a simple class that is used to read a sequence of characters. It has a simple function that reads a character another read which reads, an array of characters, and a `readLine()` function which reads a line.

`InputStreamReader()` is a function that converts the input stream of bytes into a stream of characters so that it can be read as `BufferedReader` expects a stream of characters. `BufferedReader` can throw checked Exceptions.

Using `Scanner` Class for Taking Input in Java

It is an advanced version of `BufferedReader` which was added in later versions of Java. The scanner can read formatted input. It has different functions for different types of data types.

The scanner is much easier to read as we don't have to write throws as there is no exception thrown by it.

It was added in later versions of Java



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It contains predefined functions to read an Integer, Character, and other data types as well.

Syntax of Scanner class

Scanner scn = new Scanner(System.in);

Code:

```
// Java program to read data of various types using Scanner class.
import java.util.Scanner;
public class ScannerDemo
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter name, gender, age, mobile no, cgpa");
        String name = sc.nextLine();

        char gender = sc.next().charAt(0);

        int age = sc.nextInt();

        long mobileNo = sc.nextLong();

        double cgpa = sc.nextDouble();

        System.out.println("Name: "+name);
        System.out.println("Gender: "+gender);
        System.out.println("Age: "+age);
        System.out.println("Mobile Number: "+mobileNo);
        System.out.println("CGPA: "+cgpa);
    }
}
```



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Enter name, gender, age, mobile no, cgpa

Shyam

Male

20

1234567891

9.02

Name: Shyam

Gender: M

Age: 20

Mobile Number: 1234567891

CGPA: 9.02

=== Code Execution Successful ===|

Conclusion:

BufferedReader is best for high-performance applications where efficiency is crucial and when reading large amounts of text.

Scanner is ideal for simpler applications where ease of use and versatility are prioritized, especially when dealing with various data types.