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

Aim: To apply basic programing 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

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

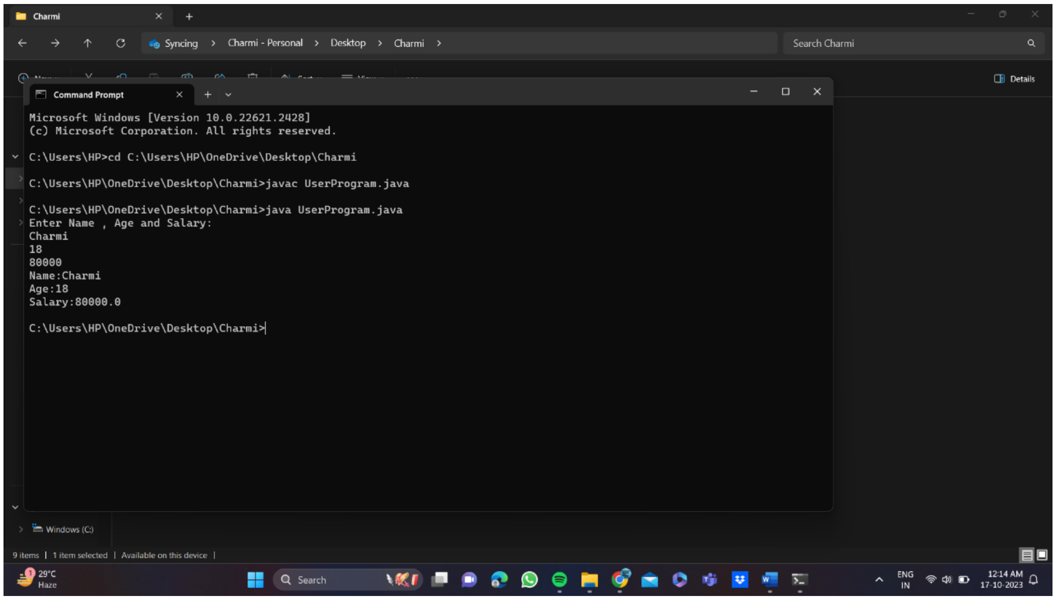
Syntax of Scanner class

Scanner scn = new Scanner(System.in);

Code:

1} Scanner class

```
import java.util.Scanner;
class UserProgram
{
  public static void main(String args[])
   {
    Scanner a = new Scanner(System.in);
    System.out.println("Enter Name , Age and Salary:");
    String str = a.nextLine();
    int age = a.nextInt();
    Double salary = a.nextDouble();
    System.out.println("Name:" + str);
    System.out.println("Age:" + age);
    System.out.println("Salary:" + salary);
   }
}
```


Charmi
Syncing › Charmi - Personal › Desktop › Charmi ›
Search Charmi
Details
Command Prompt
Windows (C:)
9 items | 1 item selected | Available on this device |
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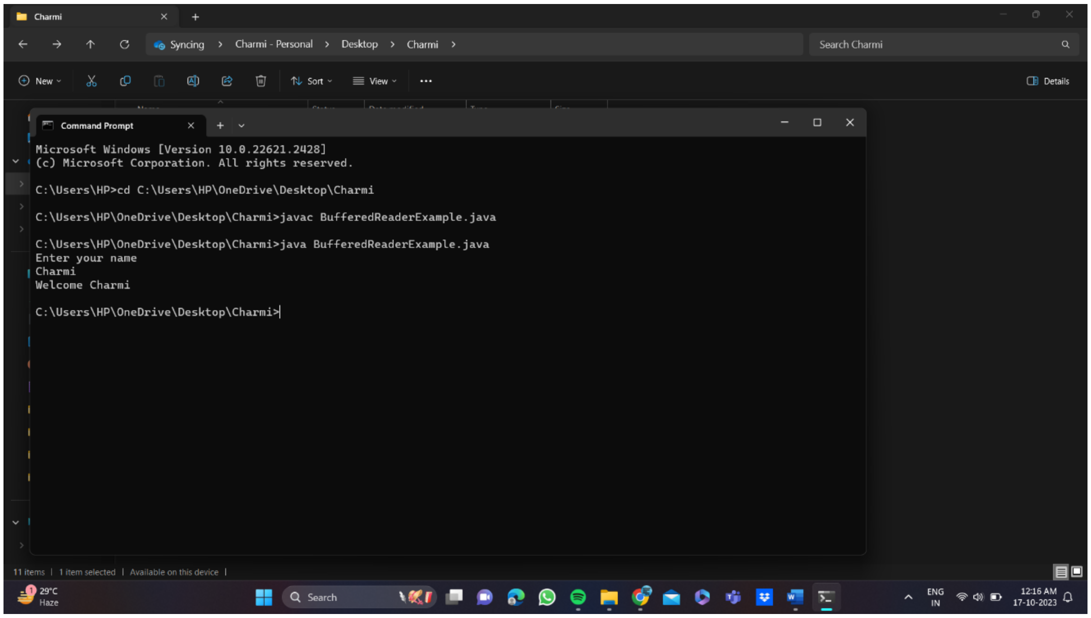
Search
ENG IN
12:14 AM 17-10-2023

```
Microsoft Windows [Version 10.0.22621.2428]
(c) Microsoft Corporation. All rights reserved.

C:\Users\HP>cd C:\Users\HP\OneDrive\Desktop\Charmi

C:\Users\HP\OneDrive\Desktop\Charmi>javac UserProgram.java

C:\Users\HP\OneDrive\Desktop\Charmi>java UserProgram.java
Enter Name , Age and Salary:
Charmi
18
80000
Name:Charmi
Age:18
Salary:80000.0

C:\Users\HP\OneDrive\Desktop\Charmi>
```

2} Buffer reader class

```
package com.javatpoint;

import java.io.*;

public class BufferedReaderExample{

public static void main(String args[])throws Exception{

   InputStreamReader r=new InputStreamReader(System.in);

   BufferedReader br=new BufferedReader(r);

   System.out.println("Enter your name");

   String name=br.readLine();

   System.out.println("Welcome "+name);

}

}
```



```
Microsoft Windows [Version 10.0.22621.2428]
(c) Microsoft Corporation. All rights reserved.

C:\Users\HP>cd C:\Users\HP\OneDrive\Desktop\Charmi

C:\Users\HP\OneDrive\Desktop\Charmi>javac BufferedReaderExample.java

C:\Users\HP\OneDrive\Desktop\Charmi>java BufferedReaderExample.java
Enter your name
Charmi
Welcome Charmi

C:\Users\HP\OneDrive\Desktop\Charmi>
```

Conclusion:

1) Comment on how you have used BufferedReader and Scanner Class for accepting user input

In Java, the BufferedReader and Scanner classes serve as popular choices for handling user input, whether it originates from the command line or other input sources. These two classes offer distinct advantages and are tailored for specific use cases. Let's explore their roles in processing user input.

BufferedReader:

Hailing from the java.io package, BufferedReader excels at efficiently reading text from character input streams. It's a go-to choice when dealing with extensive volumes of text, ensuring efficient handling of large datasets.

Scanner:

The Scanner class, residing in the java.util package, provides a more user-friendly and high-level approach to parsing and tokenizing input. Its versatility extends to reading from files and capturing user input, making it an accessible tool for various input processing tasks.