

Don Bosco Institute of Technology, Kurla
Academic Year 2023-24
EXPERIMENT NO. 2

SEMESTER:III

DATE OF PERFORMANCE:26/07/2023

SUBJECT: Skill based Lab Course: Object Oriented Programming with Java

DATE OF SUBMISSION:01/08/2023

NAME OF THE STUDENT: Bhanudas Patil

ROLL NO.:40

AIM	Program on accepting input through keyboard use following class 1.Scanner Class 2.InputStreamReader and BufferedReader 3.Console 4.Command line Args.
LEARNING OBJECTIVE	To learn the basic concepts of object-oriented programming
LEARNING OUTCOME	The student will be able to write a program with input and output
COURSE OUTCOME	Students will be able to identify all the fundamental programming constructs.
PROGRAM OUTCOME	PO1,PO2,PO3,PO4,PO5,PO9,PO10,PSO1,PSO2,PSO3.
BLOOM'S TAXONOMY LEVEL	Apply ,Create.
THEORY	<ul style="list-style-type: none">● Difference between 1.next() and nextLine() 2.InputStreamReader and BufferedReader 3.Use of util,Console,io packages.

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**LAB
EXERCISE**

- Every student will execute the Program as per the instruction and attach output as per the instruction

Append all snapshots here.

***Note: correct the program before execution.**

1. Accept input as rollno using Scanner class in java import java.util.Scanner

```
class ScannerClass{ public static void main(String args[]){
```

```
    /* Scanner is a class of java.util package */  
    Scanner sc = new Scanner(System.in);  
    System.out.println("Enter your Roll No: ");
```

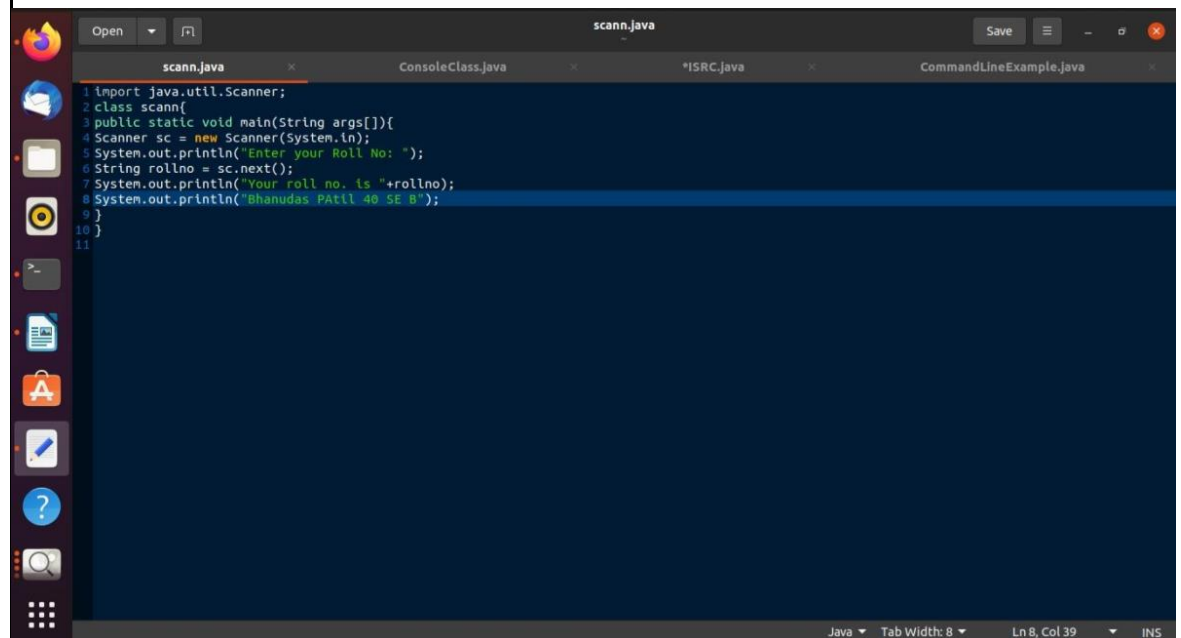
```
    /*next() is a method of scanner class which takes input from keyboard */
```

```
    String rollno = sc.next();
```

```
    System.out.println("Your rollno are " + rollno);
```

```
    }
```

```
}
```



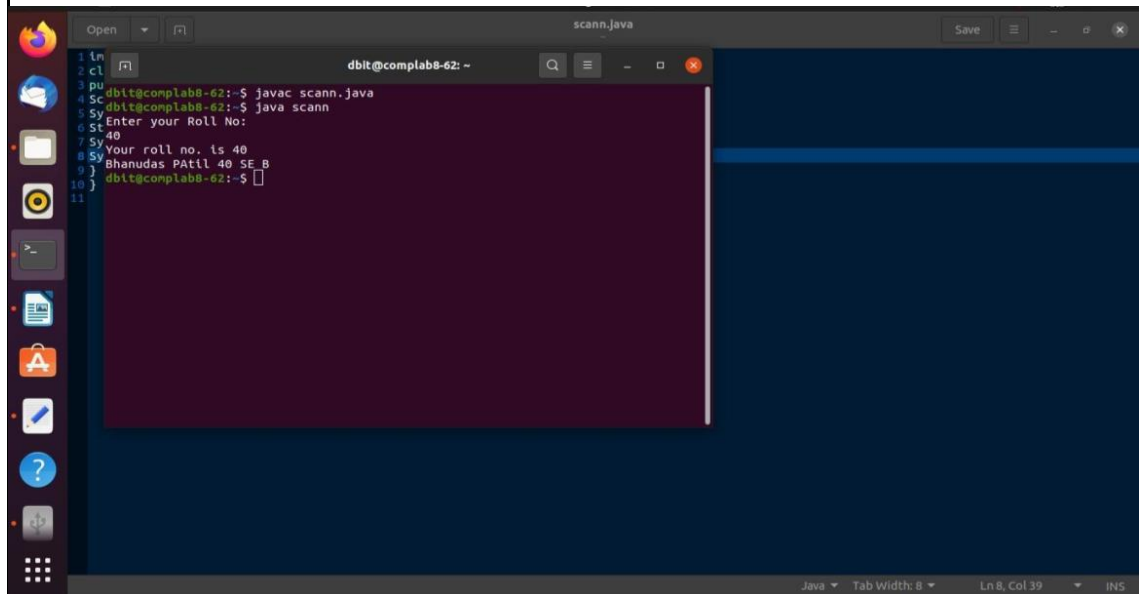
The screenshot shows an IDE window titled 'scann.java' with the following code:

```
1 import java.util.Scanner;  
2 class scann{  
3     public static void main(String args[]){  
4         Scanner sc = new Scanner(System.in);  
5         System.out.println("Enter your Roll No: ");  
6         String rollno = sc.next();  
7         System.out.println("Your roll no. is "+rollno);  
8         System.out.println("Bhanudas PATIL 40 SE B");  
9     }  
10 }  
11
```

The IDE interface includes a sidebar with icons for Explorer, Search, and Run and Debug. The bottom status bar shows 'Java', 'Tab Width: 8', 'Ln 8, Col 39', and 'INS'.

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```
1 in
2 cl
3 pu dbit@complab8-62:~$ javac scann.java
4 Sc dbit@complab8-62:~$ java scann
5 Sy Enter your Roll No:
6 St 40
7 Sy Your roll no. is 40
8 Sy Bhanudas Patil 40 SE B
9 J dbit@complab8-62:~$
```

2) Accept input using Console class in java import java.io.Console;

```
class ConsoleClass{ public static void main(String args[]){
    /* Console is a class of java.util package */

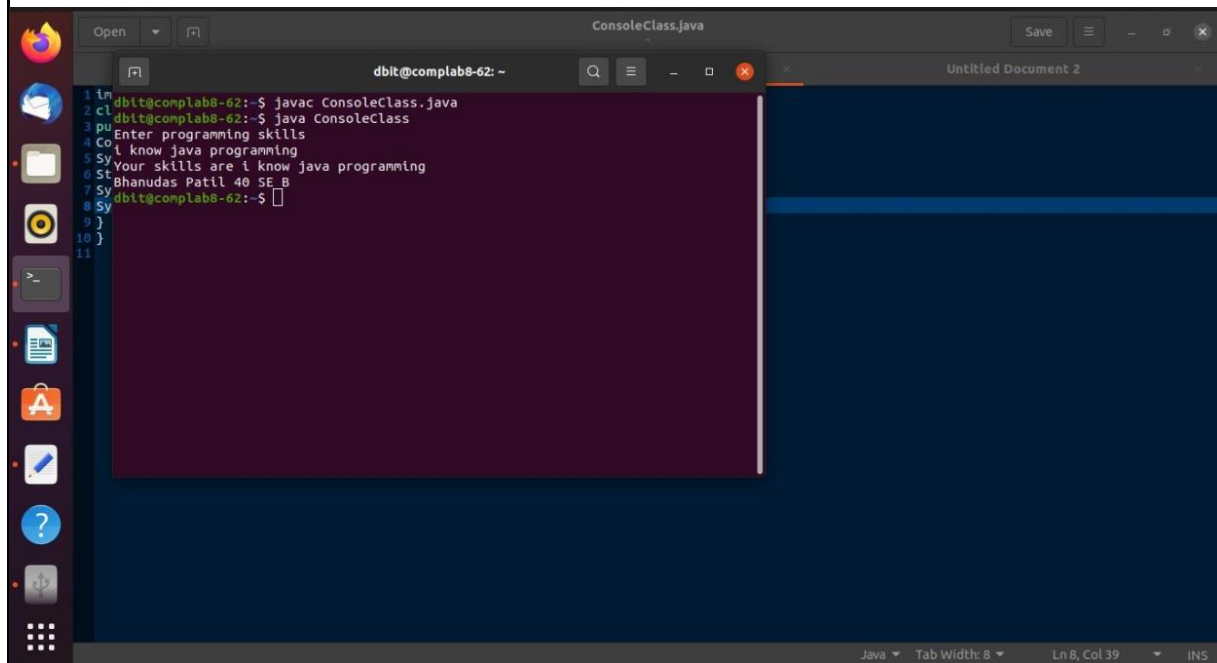
    Console con = System.console();
    System.println("Enter programming skills ");

    /*readLine() is a method of Console class which takes input from keyboard */

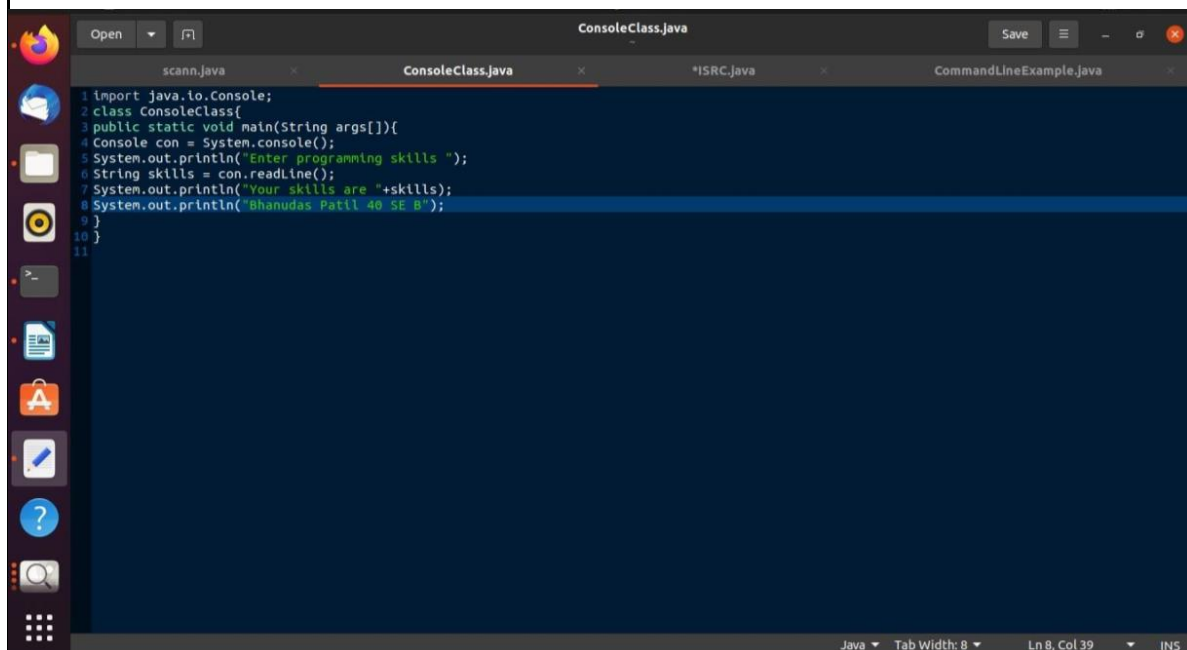
    String skills = c.readLine();
    System.out.println("Your skills are "+skills);
}
```

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```
dbit@complab8-62: ~  
1 in dbit@complab8-62:~$ javac ConsoleClass.java  
2 cl dbit@complab8-62:~$ java ConsoleClass  
3 pu Enter programming skills  
4 co Enter programming skills  
5 sy I know java programming  
6 st Your skills are I know java programming  
7 sy Bhanudas Patil 40 SE B  
8 dbit@complab8-62:~$  
9 }  
10 }  
11 }
```



```
scann.java ConsoleClass.java *SRC.java CommandLineExample.java  
1 import java.io.Console;  
2 class ConsoleClass{  
3 public static void main(String args[]){  
4 Console con = System.console();  
5 System.out.println("Enter programming skills ");  
6 String skills = con.readLine();  
7 System.out.println("Your skills are "+skills);  
8 System.out.println("Bhanudas Patil 40 SE B");  
9 }  
10 }  
11 }
```

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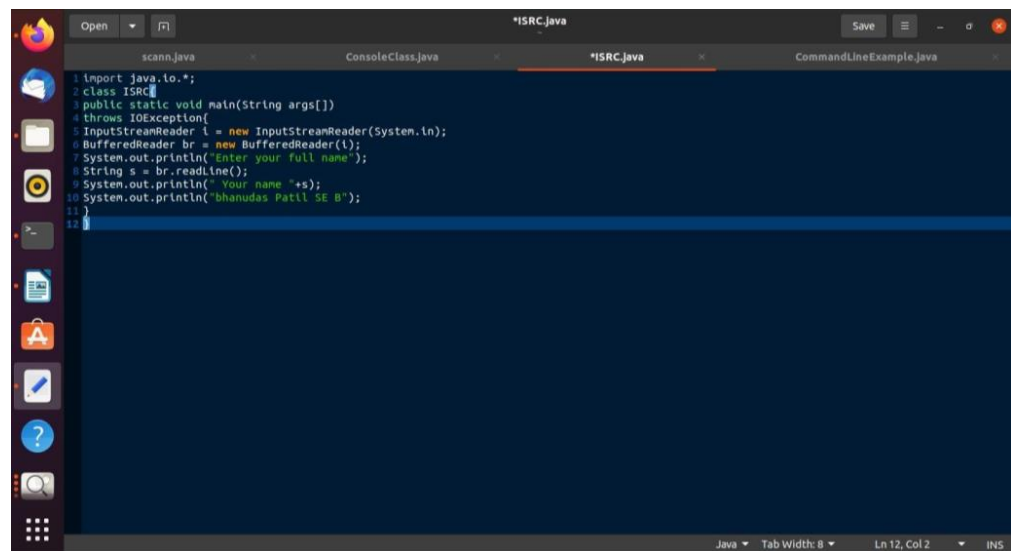
3) Accept input using InputStreamReader and BufferedReader class in java

```
import java. .*; class InputStreamReaderClass{

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

        InputStreamReader i = new InputStreamReader(System.in);
        BufferedReader br = new BufferedReader(i);
        System.out.println("Enter your full name");
        String s = br.readLine();
        System.out.println(" Your name "+s);

    }
}
```

A screenshot of an IDE window titled "ISRC.java" showing the following Java code:

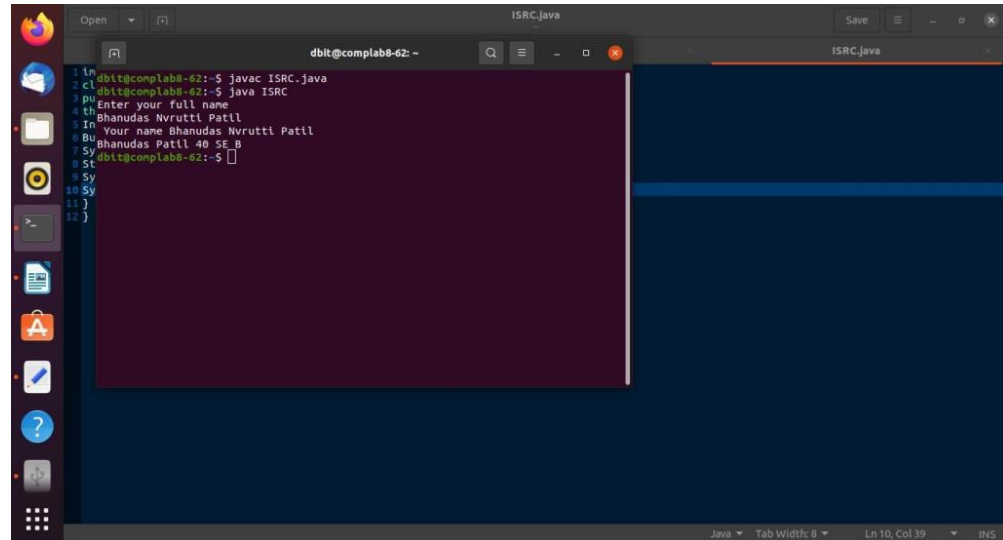
```
1 import java.io.*;
2 class ISRC {
3     public static void main(String args[])
4     throws IOException{
5         InputStreamReader i = new InputStreamReader(System.in);
6         BufferedReader br = new BufferedReader(i);
7         System.out.println("Enter your full name");
8         String s = br.readLine();
9         System.out.println(" Your name "+s);
10        System.out.println("bhanudas Patil SE B");
11    }
12 }
```

The code is displayed in a dark-themed editor with line numbers on the left. The IDE interface includes a top menu bar with "Open", "Save", and other icons, and a bottom status bar showing "Java", "Tab Width: 8", "Ln 12, Col 2", and "INS".

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OUTPUT:



```
1 In
2 cl dbit@complab8-62:~$ javac ISRC.java
3 pu dbit@complab8-62:~$ java ISRC
4 th Enter your full name
5 th Bhanudas Nvrutti Patil
6 In Your name Bhanudas Nvrutti Patil
7 Bu Bhanudas Patil 40 SE B
8 Sy
9 St dbit@complab8-62:~$
```

4. Accept input using command line arguments in java .

1.single argument.

```
class CommandLineExample{ public static
void main(String args[]){
System.out.println("Your first argument is: "+args[0]);
}
}
```

2.multiple arguments(display to rollno 1 to 10)

```
class A{ public static void main(String args[])

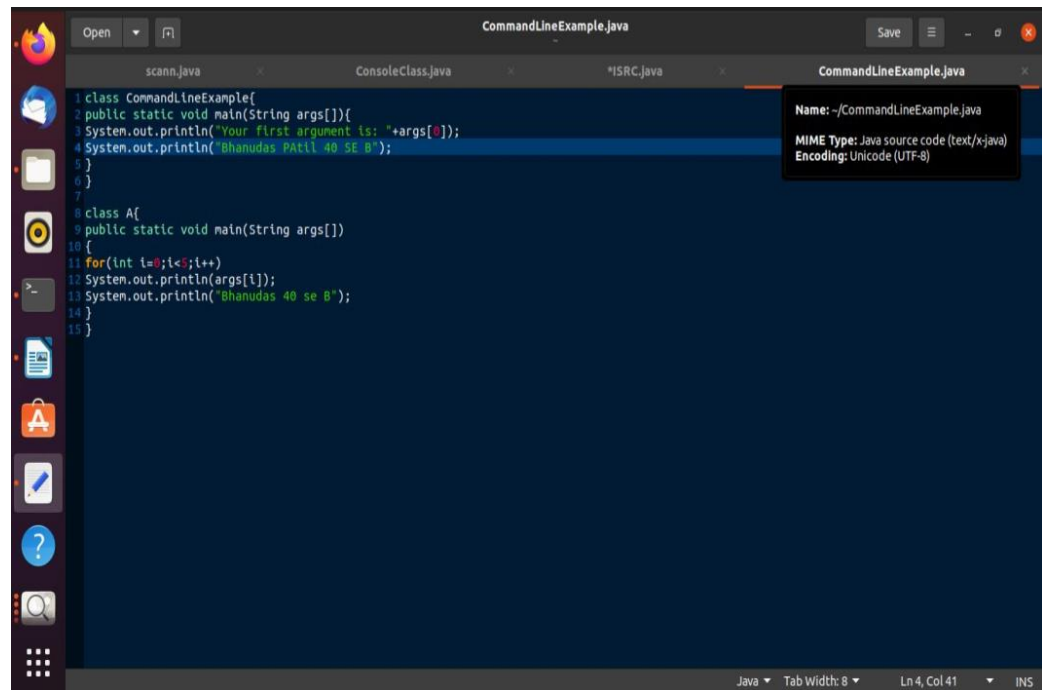
{ for(int i=0;i<args;i++)

System.out.println(args[i]);

}}
```

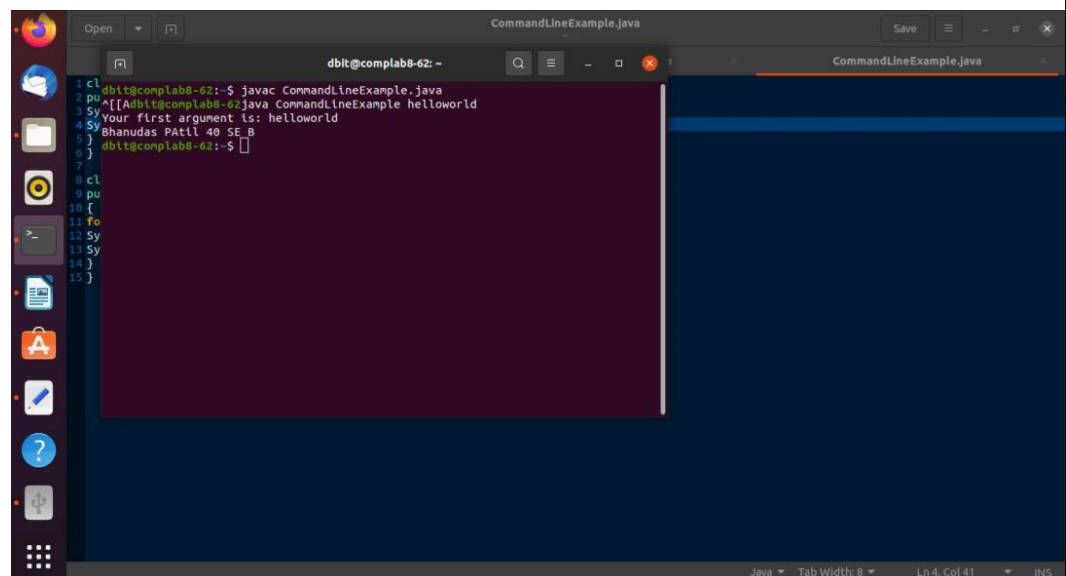
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```
1 class CommandLineExample{
2 public static void main(String args[]){
3 System.out.println("Your first argument is: "+args[0]);
4 System.out.println("Bhanudas Patil 40 SE B");
5 }
6 }
7
8 class A{
9 public static void main(String args[])
10 {
11 for(int i=0;i<args.length;i++)
12 System.out.println(args[i]);
13 System.out.println("Bhanudas 40 se B");
14 }
15 }
```

File Metadata:
Name: ~/CommandLineExample.java
MIME Type: Java source code (text/x-java)
Encoding: Unicode (UTF-8)



```
1 cl
2 dbit@complab8-62:~$ javac CommandLineExample.java
3 dbit@complab8-62:~$ java CommandLineExample helloworld
4 Your first argument is: helloworld
5 dbit@complab8-62:~$
```

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REFERENCES	1. https://www.javatpoint.com/java-oops-concepts 2. https://www.geeksforgeeks.org/object-oriented-programming-oops-concept-in-java/ 3. https://www.javatpoint.com/java-oops-concepts
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THEORY QUESTIONS

Q1. Difference between next () and nextLine ()?

Answer-

Next()	NextLine()
1.Reads input from input device till space character.	1. Reads input from input device till line is changed.
2. Cannot read words having space in it.	2. Can read those words having space in It.
3. Places cursor in same line after reading input.	3. Places cursor in next line after reading Input.
4. Escaping Sequence is Space.	4. Escaping Sequence is '\n'.
5. Syntax is : Scanner_object.next();	5. Syntax is : Scanner_object.nextLine();

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Q2) Difference between InputStreamReader and BufferedReader.

Answer-

InputStreamReader	BufferedReader
<ol style="list-style-type: none">1. Used to read characters from any type of character input stream like String, Files, etc.2. Uses Buffer internally to read files.3. Its much faster.4. Much more efficient for reading files.5. Used to read a single character as well as a line at the same time.	<ol style="list-style-type: none">1. Used only for reading files.2. Directly reads from the file by accessing the hard drive.3. Its much slower.4. Less efficient for reading files.5. Can read only one character at a Time.

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Q3.) What is use of util, Console, Io packages?

Answer-

1. UTIL Package - The java.util package in Java is a built-in package that contains various utility classes and interfaces. It provides basic functionality for commonly occurring use cases.
2. Console Package – It is used to get Input from console Class.
3. IO Package – It provides for system input and output through data streams, serialization and the file system.