Logical Program

Java Scanner Class

Java **Scanner class** allows the **user** to take input **from** the console. It belongs to **java.util** package. It is used to read the input of primitive types like int, double, long, short, float, and byte. It is the easiest way to read input in Java program.

Syntax

Scanner scan=**new** Scanner(System.in);

The above statement creates a constructor of the Scanner class having **System.in** as an argument. It means it is going to **read** from the standard input stream of the program. The **java.util** package should be import while using Scanner class.
It also converts the Bytes (from the input stream) into characters using the platform's default charset.

1. **How to accept integer input from user (accept input from user)**

```
package Logical_program;

import java.util.Scanner;

public class example1_AcceptInputFromUser
{
	public static void main(String[] args)
	{
		//create object of Scaner class and pass input System.in
Scanner scan = new Scanner(System.in); //System.in is a standard input stream

		//call nextInt() method and store to one variable
		System.out.println("enter num1:");
		int num1 = scan.nextInt();		//accept int input from user

		System.out.println("enter num2:");
		int num2 = scan.nextInt();

		System.out.println("Addition of 2 num:"+(num1+num2));
	}
}
```

```
enter num1:
10
enter num2:
20
Addition of 2 num:30
```

2. **How to accept String input from user**

```
import java.util.Scanner;

public class example2_AcceptStringInputFromUser
{
	public static void main(String[] args)
	{
Scanner scan = new Scanner(System.in); //System.in standered input stream

		System.out.println("Enter String:");
		String str = scan.nextLine(); //read line

		System.out.println("You have entered="+str);
	}
}
Enter String:
mangesh
You have entered=mangesh
```

3. **How to accept Boolean input from user**

```
package Logical_program;

import java.util.Scanner;import
org.omg.PortableInterceptor.SYSTEM_EXCEPTION;

public class example3_AcceptBooleanInputFromUser
{
	public static void main(String[] args)
	{
		Scanner scan = new Scanner(System.in);
```

```
		System.out.println("Enter Boolean:");
		boolean bool = scan.nextBoolean();

		System.out.println("You have entered="+bool);
	}
}
Enter Boolean:
true
You have entered=true
```

4. **How to reverse your name**

```
package String;

public class reverseString
{
	public static void main(String[] args)
	{
		String s = "mangesh";

		for (int i = s.length()-1; i>=0; i--)
		{
			System.out.print(s.charAt(i));
		}
		System.out.println();

		for (int i = 0; i <= s.length()-1; i++)
		{
			System.out.print(s.charAt(i));
		}
	}
}
Consol output- hsegnam
               Mangesh
```

5. **To compare array data same or different**

```
package Logical_program;

import java.util.Arrays;

public class example4_compaireArrayData
{
	public static void main(String[] args)
	{

		//To compare array data same or different
		//use to compare 2 single dimension array
		//Arrays.equals(arg0,arg1)

		int ar1[]= {10,20,30};

		int ar2[]= {40,50,60};

		int ar3[]= {40,50,60};

		System.out.println(Arrays.equals(ar1, ar2)); //false

		System.out.println(Arrays.equals(ar1, ar3)); //false

		System.out.println(Arrays.equals(ar3, ar2)); //true

		//To compare array data same or different
		//use to compare 2 multi dimension array
		//Arrays.deepEquals(arg0,arg1)
	}
}
```

Consol
false
false
true

6. **To multiply two number without using multiplication operator**

```
package Logical_program;

public class example5_multiplyTwoNumberWithoutMultiplicationOperator
{
	public static void main(String[] args)
	{
		//To multiply two no without using multiplication operator

		int num1=10;
		int num2=20;
		int sum=0;

		for (int i = 1; i <= num2; i++)
		{
			sum = sum + num1;
		}
		System.out.println(sum);
	}
}
```

Consol
200

7. **To multiply, addition & subtraction of two number using Scanner class**

```
package Logical_program;

import java.util.Scanner;

public class mul_using_scaner

{
	public static void main(String[] args)
	{
		Scanner scan = new Scanner(System.in);

		int a = scan.nextInt();
		int b = scan.nextInt();
```

```
                System.out.println(a*b);
                System.out.println(a-b);
                System.out.println(a+b);

        }
}
```

```
Consol
20
10
200
10
30
```

8. **Reverse string**

```
package Logical_program;

public class example6_reverseString1
{
        public static void main(String[] args)
        {
                String s="mangesh";
                String reve="";

                for (int i = s.length()-1; i >=0; i--)
                {
                        reve=reve+s.charAt(i);
                }
                System.out.println(reve);
        }
}
```

```
Consol
Hegnam
```

```
package Logical_program;

public class example6_ReverseString
```

```
{
	public static void main(String[] args)
	{
		String s = "abcd";

		//String index start from 0

		for (int i = s.length()-1; i>=0; i--)
		{
			System.out.print(s.charAt(i));
		}
		System.out.println();

		for (int i = 0; i <= s.length()-1; i++)
		{
			System.out.print(s.charAt(i));
		}
	}
}
Consol
hsegnam
mangesh
```

9. **Write a program on String palindrome**

```
package Logical_program;

public class example7_pallindrome
{
	public static void main(String[] args)
	{
		//A palindrome is a string that is the same read forward or backward.

		String s = "abcba";
		String rev = "";

		for (int i = s.length()-1; i >= 0; i--)
		{
			rev=rev + s.charAt(i);    //Execute right hand side statement
		}
```

```
		System.out.println(rev);

		if (s.equals(rev))
		{
			System.out.println("given string is pallindrome");
		}
		else
		{
			System.out.println("given string is not pallindrome");
		}
	}
```

Consol
abcba
given string is pallindrome

10.Write a program by using scanner class given no is even or odd

```
package Logical_program;

import java.util.Scanner;

public class example8_givenNoEvenorOdd
{
	public static void main(String[] args)
	{
		//using scanner class

		Scanner scan = new Scanner(System.in);

		System.out.println("enter no.");
		int num=scan.nextInt();

		if (num%2==0)
		{
			System.out.println("given no is even");
		}
		else
		{
			System.out.println("given no is odd");
```

```
		}
	}
}
```

11. Write a program on factorial number

```
package Logical_program;

public class example9_factorialNumber
{
	public static void main(String[] args)
	{
//The factorial of a number is the product of all the integers from 1 to that number. For example, the factorial of 6 is 1*2*3*4*5*6 = 720. Factorial is not defined for negative numbers, and the factorial of zero is one, 0!

		int num=5;    //5*4*3*2*1        //last num & first num declare
		int fact=1;

		for (int i = num; i >= 1; i--)
		{
			fact = fact*i;
		}
		System.out.println(fact);
	}
}
```

12. Write a program on Armstrong number

```
package Logical_program;

public class example10_armstrongNumber
{
	public static void main(String[] args)
	{
//Armstrong number is a number that is equal to the sum of cubes of its digits.

		int OrgNum=153;  //1+125+27=153
		int sum =0;
```

```
		for (int i = OrgNum; i >0; i=i/10)
		{
			int rem=i%10;
			sum=sum+(rem*rem*rem);
		}

		if (OrgNum==sum)
		{
			System.out.println("given number"+OrgNum+"is an armstrong number");
		}
		else
		{
			System.out.println("given number" + OrgNum + "is not an armstrong number");
		}
	}
}
```

Consol
given number153is an armstrong number

13. find total no of white spaces in string

```
package Logical_program;

public class example11_findTotalNoofWhilteSpacessInString
{
	public static void main(String[] args)
	{
		String s="ab  c d";
		int count=0;

		for (int i = 0; i <= s.length()-1; i++)
		{
			char s1 = s.charAt(i);

			if (s1 == ' ')
			{
				count++;
```

```
                }
            }
            System.out.println("no of spaces in given string:"+count);
        }
}
```

Consol

```
no of spaces in given string:4
```

14. write a program on prime number

```
package Logical_program;

public class example12_primeNumber
{
    public static void main(String[] args)
    {
        //a number that is divisible only by itself and 1

        int num=7;
        int count=0;

        for (int i = 2; i < num; i++)
        {
            if (num%i==0)
            {
                count++;
                break;
            }
        }

        if (count==1)
        {
            System.out.println("given no is not a prime number");
        }
        else
        {
            System.out.println("given no is a prime number");
        }
    }
```

}

Consol
given no is a prime number