Shree Pokhariya Secondary School

Brt-3.Morang

Annual Laboratory report for java programming language
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Instructor

Lab Assistant

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ii.Program demonstrating non-primitive datatypes (List,dict,arrays)

Operators:

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ii.Program demonstrating various logical operators

iii.Program demonstrating operators on the basis of literals

Strings:

i.Program demonstrating string concatenation

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Control statements:

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Loops:

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ii.Program demonstrating for loop

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Oops:

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Additional:

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ii.Program implementing FCFS algorithm

iii.Program to find fibonacci number

iv.Program for reversing an string

v.Program to check whether the entered number is a palindrome number or not

vi.Program to print armstrong number between 100 and 1000

vii.Program to check weather the number is divisible by 5 or not

vii.Program to find prime number to n numbers

1.Program to print hello world

```
class Main{
	public static void main(String []args){
		System.out.println("Hello world");
	}
}
```

Output:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
1_helloWorld.java
Hello world
```

fig:Hello world program

2.Program to sum two numbers

```
class Sum{
	public static void main(String args[]){
		int a = 10;
		int b = 20;
		int c = a+b;
		System.out.println("Sum of"+a+" and "+b+" is "+c);
	}
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
2_operators_Sum.java
Sum of10 and 20 is 30
```

fig:Sum operator

3.Program to find difference between two numbers

```
class Main{
	public static void main(String []args){
		int a = 10;
		int b = 20;
		int c = b-a;
		System.out.println("the difference of "+a+" and "+b+" is "+c);
	}
}
```

Output

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
3_operator_difference.java
the difference of 10 and 20 is 10
```

fig:Difference operators

4. Program to find product of two number

```
class operator_product{
        public static void main(String args[]){
                int a = 10;
                int b = 20;
                int c = a*b;
                System.out.println("the product of "+a+" and "+b+" is "+c);
        }
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
4_operator_product.java
the product of 10 and 20 is 200
```

Fig:multiplication operator

5.Program to devide a number with another

```
class operator_division{
        public static void main(String []args){
                int a = 10;
                int b = 20;
                float c = b/a;
                System.out.println("the quotient ,dividing"+b+" with "+a" is "+c);
        }
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
5_operator_division.java
the quotient ,deviding 20 with 10 is 2.0
```

Fig:division operator

6.Program for modulus division

```
class modulus_division{
        public static void main(String args[]){
                int a = 3;
                int b = 2;
                int c = a%b
                System.out.println("the remainder in devision of "+a+" by "+b+ " is "+c);
        }
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ ja
6_operator_modulus.java
the remainder in devision of 3 by 2 is 1
```

Fig:modulus division

7.Program for and operator

```
class operator_logical_and{
        public static void main(String args[]){
                if(1 != 2 && 2!=3){
                        System.out.println("Hello Bishal");
                }
        }
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
7.operator_logical_and.java
This is and operator
```

fig:And operator

8.Program demonstrating or operator

```
class operator_logical_and{
        public static void main(String args[]){
                if((2==2) || (3!=3)){
                        System.out.println("Hello Bishal");
                }       }
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
 8_operator_logical_or.java
Hello Bishal
```

Fig:Or operator

9.Program demonstrating unary operator

```
class UnaryOperator{
        public static void main(String[] args) {
                int a = 1;
                while(a<10){
                        System.out.print(a+"\t");
                        a+=1;
                }
        }
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
 9_unary_operator.java
1       2       3       4       5       6       7       8       9       bi
```

Fig: unary operator

10.Program using several string methods

```
class stringMethod{
	public static void main(String[] args) {
		String testString = "my text String";
		System.out.println(testString.charAt(2));   //returns space
		System.out.println(testString.equals("testString1")); //returns false
		System.out.println(testString.compareTo("my text String"));  //return true
		System.out.println(testString.concat("my text 2"));  //add the texts
	}
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java 10
_string_methods.java

false
0
my text Stringmy text 2
```

Fig: string methods

11.Program for concatenating two string

```
class concatenation{
	public static void main(String[] args) {
		String firstName = "Bishal";
		String lastName = "Shah";
		System.out.println(firstName+lastName);
	}
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java 11
_string_concatenation.java
BishalShah
```

Fig:string concatenation

12.Program demonstration if statement

```
class condinational_if{
	public static void main(String[] args) {
		int a= 10;
		if(a%2 == 0){
			System.out.println("the number "+a+"is even");
		}
		else{
			System.out.println("the number "+a+"is odd");
		}
	}
```

}
Output:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java 12
_condiational_if.java
the number 10is even
```

Fig:if statement

13.Program demonstrating nested if

```
class nestedIf{
	public static void main(String[] args) {
		int a = 10;
		if(a%2 == 0){
			System.out.println("the number "+a+" is even");
		}
		else if(a%2!=0){
			System.out.println("the number "+a+" is odd");

		}
		else{
			System.out.println("please rerun the program and enter integer");
		}
	}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java 13_conditional_if_l
adder.java
the number 10 is even
```

14.

```
class whileLoop{
	public static void main(String[] args) {
		Scanner get = new Scanner(System.in);
		System.out.println("Enter a number");
		a = get.nextInt();
		boolean isPrime;
		int temp = 3;
		if (a>2){
			while(temp<a){
				if(a%temp !=0){
					isPrime = true;
				}
				else{
					isPrime = false;
				}
			}
```

```
        }
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
14_while_loop.java
Enter a number
5
THe value of a is 5 now and decreasing for 1
THe value of a is 4 now and decreasing for 1
THe value of a is 3 now and decreasing for 1
THe value of a is 2 now and decreasing for 1
```

15.

```
import java.util.Scanner;
class dowhileLoop{
        public static void main(String[] args) {
                int a = 2;
                do{
                        System.out.println("Hello world");
                        a  = a+2;
                }
                while(a<10);
        }
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
15_do_whileloop.java
Hello world
Hello world
Hello world
Hello world
```

16.program demonstrating do while loop

```
class forLoop{
        public static void main(String[] args) {
                for(int i = 1;i<10;i++){
                        System.out.println("Hello world");
                }
        }
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
15_do_whileloop.java
Hello world
Hello world
Hello world
Hello world
```

17.Program demonstrating switch case

```
class Switchcase{
        public static void main(String[] args) {
                int day = 4;
                switch (day) {
                  case 1:
                    System.out.println("Monday");
                    break;
                  case 2:
                    System.out.println("Tuesday");
                    break;
                  case 3:
                    System.out.println("Wednesday");
                    break;
                  case 4:
                    System.out.println("Thursday");
                    break;
                  case 5:
                    System.out.println("Friday");
                    break;
                  case 6:
                    System.out.println("Saturday");
                    break;
                  case 7:
                    System.out.println("Sunday");
                    break;
                }
        }
}
```

Output:

```
}bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
17_switch_Case.java
Thursday
```

18.Program demonstrating class and object

```
class Main{
	public static void main(String[] args) {
		int l = 10;
		int b = 5;
		Rectangle rect1 = new Rectangle();
		rect1.getData(12,3);
		rect1.Area();
		rect1.Perimeter();

	}
}

class Rectangle{
	int length;
	int bredth;

	void Rectangle(){
		System.out.println("Initilized");
	}
	void getData(int l,int b){
		length = l;
		bredth = b;
	}
	void Area(){
		System.out.println("Area is"+(length*bredth));
	}
	void Perimeter(){
		int peri ;
		peri = 2*(length+bredth);
		System.out.println("Perimeter is "+peri);
	}
```

Output:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
18_classAndObj.java
Area is36
Perimeter is 30
```

19.Program demonstrating single inheritance

```
class SingleInheritance extends Rectangle{
	public static void main(String[] args) {
		SingleInheritance example = new SingleInheritance();
		example.Area();

	}
}
class Rectangle{
	int length = 10;
	int bredth = 5;
	void Area(){
		System.out.println("Area is"+(length*bredth));
	}
}
```

OUTPUT:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
19_single_inheritance.java
Area is50
```

20.

```
class C extends B{
	public void z(){
		super.y();
		System.out.println("Hello world by C");
	}
	public static void main(String[] args) {
		C example = new C();
		example.z();
	}
}

class A{
	public void x(){
		System.out.println("Hello world by A");
	}
}
class B extends A{
	public void y(){
		super.x();
		System.out.println("Hello world by B");
	}
}
```

OutPut:

```
bishal@bishal-HP-Laptop-15-bw0xx:~/Documents/java_annual_lab_Report$ java
 20_multilevel_Inheritance.java
Hello world by A
Hello world by B
Hello world by C
```
