ASSIGNMENT -5

Hemavarshini D

Program 1:Program using Arithmetic operators

```
import java.util.Scanner;

public class ArithmeticOperators {

public static void main(String[] args) {

 Scanner sc = new Scanner(System.in);

 System.out.println("Please enter two numbers");

 int num1 = sc.nextInt();

 int num2 = sc.nextInt();

 System.out.println("The addition of two integers is:" + (num1 + num2));

 float result = num1 - num2;

 float result2 = num1 / num2;

 System.out.println("The subraction of two numbers is:" + result);

 System.out.println("The multiplication of two numbers is:" + (num1 * num2));

 System.out.println("The division of two numbers is:" + result2);

 System.out.println("The remainer when the first number is divided by second number:" + (num1 %
num2));

 System.out.println("The -(minus) opertor will negates the result:" + -result);

 char ch = 'A';

 System.out.println("The + operator will promotes the output to int if it is byte or char or short:" + +ch);
// ++ --(increment,decrement)

 System.out.println("prints and then increments:" + num1++);// post increment

 System.out.println("first increments and then prints:" + ++num1);// pre increment

 System.out.println("first prints and then decrements:" + num2--);// post decrement

 System.out.println("first decrements and then prints" + --num2);// pre decrement
```

```
}

}
```

Program 2:Program using arithmetic assignment operators

```
import java.util.Scanner;

public class ArithmeticAssignmentOperator {

public static void main(String[] args) {

 //The Arithmetic operators are = += -+ /= *= %=

Scanner sc = new Scanner(System.in);

System.out.println("Please enter two numbers");

int a = sc.nextInt();

int b = sc.nextInt();

System.out.println(a+=b);//this operation performs a=a+b

System.out.println(a-=b);//this operation performs a=a-b

System.out.println(a*=b);//this operation performs a=a*b

System.out.println("Please enter two numbers");

int a1 = sc.nextInt();

int b1= sc.nextInt();

System.out.println(a1/=b1);//this operation performs a1=a1/b1

System.out.println(a1%=b1); //this operation performs a1=a1%b1 the value of b1 to a1

System.out.println(a1=b1);//this assigns the value of b1 to a1

}

}
```

Program:3 Program using relational operators

```
import java.util.Scanner;

public class RelationalOperators {
```

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

 //The relational operators are == > < <= >= !=

 Scanner sc = new Scanner(System.in);

 System.out.println("Please enter two numbers");

 int num1 = sc.nextInt();

 int num2 = sc.nextInt();

 System.out.println("The relational operators checks the given condition and returns boolean value i.e,
true or false");

 System.out.println(num1==num2);//if num1 is equal to num2 ,returns true else false

 System.out.println(num1>num2);//if num1 is greater than num2 ,returns true else false

 System.out.println(num1<num2);//if num1 is smaller than num2 ,returns true else false

 System.out.println(num1>=num2);//if num1 is > or = to num2 ,returns true else false

 System.out.println(num1<=num2);//if num1 < or = to num2 ,returns true else false

 System.out.println(num1!=num2);//if num1 is not equal to num2 ,returns true else false

}

}
```

Program 4:program using logical operators

```
import java.util.Scanner;

public class LogicalOperator {

public static void main(String[] args) {

  Scanner sc = new Scanner(System.in);

 System.out.println("Please enter four numbers");

 int num1 = sc.nextInt();

 int num2 = sc.nextInt();

 int num3=sc.nextInt();

 int num4=sc.nextInt();
```

```
// && operator(Logical AND prints true only if both expression1 and expression2 are true
System.out.println("logical AND operation");
System.out.println((num1 > num2) && (num3 > num4));
System.out.println((num1> num2) && (num3 < num4));
// || (Logical OR) operator prints true if either expression1 or expression2 is true
System.out.println("logical OR operation");
System.out.println((num1< num2) || (num3 > num4));
System.out.println((num1 > num2) || (num3 < num4));
System.out.println((num1 < num2) || (num3 < num4));
// !(Logical NOT) operator prints true if expression is false and vice versa
System.out.println("logical NOT operation");
System.out.println(!(num1== num2));
System.out.println(!(num1<num2));
System.out.println(!(num2>=num4));
System.out.println(!(num4<= num3));
}
}
```

Program 5:Program to check student age is greater than 18

```
import java.util.Scanner;
public class StudentAge {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.println("Please enter the student age");
int age=sc.nextInt();
String result =(age>18) ?"eligible":"not eligible";//ternary operator
```

```
System.out.println(result);}
}
```

Program 6:Program to check the number is even or odd

```
import java.util.Scanner;
public class EvenOdd {
public static void main(String[] args) {
 Scanner sc = new Scanner(System.in) ;
 System.out.println("Please enter your number to check whether it is even or odd:");
 int num = sc.nextInt();
 System.out.println("If a entered number is even it will print true ,it if is odd it will print false");
 System.out.println(num%2==0);
}
}
```

Program 7:Program to check whether the given number is greater than 100 and 200

```
import java.util.Scanner;
public class Program7 {
public static void main(String[] args) {
 Scanner sc = new Scanner(System.in) ;
 System.out.println("Please enter your number to check whether it is greater than 100 and 200:");
 int num = sc.nextInt();
 System.out.println("If entered number is greater than 100 and 200 it will say true else it will say false..");
System.out.println(num>100 && num>200);
}
}
```

Program 8:Program to check both numebers or same or not

```
import java.util.Scanner;

public class Program8 {

public static void main(String[] args) {

 Scanner sc = new Scanner(System.in) ;

 System.out.println("Please enter two numbers to check whether it is same or not:");

 int num1 = sc.nextInt();

 int num2 = sc.nextInt();

 System.out.println("If the entered numbers are same it will say true else it will say false");

 System.out.println(num1==num2);

}

}
```