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();
		// The binary Arithmetic operators are + - * / %
		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));

		//  Unary operators  are which operates on single operand + -
		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) {
		// TODO Auto-generated method stub
//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) {
		// TODO Auto-generated method stub
	//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 greater than or equal to
num2 ,returns true else false
                System.out.println(num1<=num2);//if num1 is smaller than or equal 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) {
                // TODO Auto-generated method stub
                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) {
		// TODO Auto-generated method stub
Scanner sc = new Scanner(System.in);
System.out.println("Please enter the student age");
int age=sc.nextInt();
System.out.println("is student age greater than 18?");//if student age is greater than 18 ,it will print true else false.
System.out.println(age>18);
	}

}
```

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

```
import java.util.Scanner;

public class EvenOdd {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		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();
		// TODO Auto-generated method stub
		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) {
		// TODO Auto-generated method stub
		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);
	}

}
```