

**Premium Coding  
Courses by Programiz****ArithmeticPromotionExample.java****Run****Output**

```
1 //Suraj Ashirwad Disawar
2 //CS2140
3 ~ public class ArithmeticPromotionExample {
4 ~   public static void main(String[] args) {
5     byte b = 10;
6     short s = 20;
7     char c = 'A';
8     int i = 30;
9     float f = 10.5f;
10    double d = 12.48;
11    int result1 = b + s;
12    System.out.println("byte + short (int): " + result1);
13    int result2 = i + c;
14    System.out.println("int + char (int): " + result2);
15    float result3 = i * f;
16    System.out.println("int * float (float): " + result3);
17    double result4 = f / d;
18    System.out.println("float / double (double): " + result4);
19 }
20 }
21 }
```

```
byte + short (int): 30
int + char (int): 95
int * float (float): 315.0
float / double (double): 0.8413461538461539
== Code Execution Successful ==
```



## Main.java

```
1 public class OperatorExample
2 {
3     public static void main(String args[])
4     {
5         int a = 20;
6         int b = 10;
7
8         System.out.println(a + b);
9         System.out.println(a - b);
10        System.out.println(a * b);
11        System.out.println(a / b);
12        System.out.println(a % b);
13    }
14 }
```



## Output

30  
10  
200  
2  
0

==== Code Execution Successful ===

## Main.java

```
1 // Suraj Ashirwad Bisawar
2 // Roll No : CS2140
3 class Student
4 {
5     int Roll_No=2140;
6     String Name = "Suraj Bisawar";
7     public void info ()
8     {
9         char div='A';
10        long mob=7498480328L;
11        System.out.println("Division=" + div);
12        System.out.println("mobile=" + mob);
13    }
14    public static void main(String[] args)
15    {
16        Student obj =new Student();
17        obj.info();
18        System.out.println("Roll No=" + obj.Roll_No);
19        System.out.println("Name=" + obj.Name);
20    }
21 }
```

### StringManipulation.java

```
1 ~ public class StringManipulation {  
2 ~   public static void main(String[] args) {  
3 ~     String text = "Hello. Java!";  
4 ~  
5 ~     System.out.println("Length of string: " + text.length());  
6 ~  
7 ~     System.out.println("Character at index 4: " + text.charAt(3));  
8 ~  
9 ~     System.out.println("Substring from index 7: . Java!");  
10 ~  
11 ~     System.out.println("Substring from index 7: " + text.substring(5  
12 ~ ));  
13 ~     System.out.println("Uppercase version: " + text.toUpperCase());  
14 ~  
15 ~  
16 ~     System.out.println("Index of 'J': " + text.indexOf('J'));  
17 ~  
18 ~ }
```

### Output

Length of string: 12  
Character at index 4: J  
Substring from index 7: . Java!  
Uppercase version: HELLO. JAVA!  
Index of 'J': 9

--- Code Execution Successful ---

### MathOperations.java

### Output

```
1 ~ public class MathOperations {  
2 ~   public static void main(String[] args) {  
3 ~     double num1 = 36;  
4 ~     double num2 = 49;  
5 ~  
6 ~     System.out.println("Square root of " + num1 + ":" + Math.sqrt  
(num1));  
7 ~  
8 ~     System.out.println(num1 + " raised to the power of " + num2 + ":"  
+ Math.pow(num1, num2));  
9 ~  
10 ~    System.out.println("Maximum of " + num1 + " and " + num2 + ":" +  
Math.max(num1, num2));  
11 ~  
12 ~    System.out.println("Minimum of " + num1 + " and " + num2 + ":" +  
Math.min(num1, num2));  
13 ~  
14 ~    System.out.println("Random number: " + Math.random());  
15 ~  }  
16 ~}
```

Run

Output

Square root of 36.0: 6.0  
36.0 raised to the power of 49.0: 1.8147739541668637E76  
Maximum of 36.0 and 49.0: 49.0  
Minimum of 36.0 and 49.0: 36.0  
Random number: 0.614294454992305  
==== Code Execution Successful ===

## ArrayTraversal.java



Run

```
1 // Online Java Compiler
2 // Use this editor to write, compile and run your Java code online
3
4 public class ArrayTraversal {
5     public static void main(String[] args) {
6         int[] numbers = {10, 20, 30, 40, 50};
7
8         System.out.println("Array elements are:");
9         for (int i = 0; i < numbers.length; i++) {
10             System.out.println("Element at index " + i + ": " +
11                 numbers[i]);
12     }
13 }
```

## ArrayTraversal2D.java

Run Share

Output

1 // Online Java Compiler

2 // Use this editor to write, compile and run your Java code online

3

30 40

4 public class ArrayTraversal2D {

5 • public static void main(String[] args) {

6 int[][] numbers = {{10, 20}, {30, 40},

7 };

8

9 System.out.println("Matrix form:");

10 • for (int i = 0; i < numbers.length; i++) {

11 •     for (int j = 0; j < numbers[i].length; j++) {

12         System.out.print(numbers[i][j] + " ");

13 }

14 System.out.println();

Matrix form:

10 20

== Code Execution Successful

## ArrayTraversal2D.java

Run Share

Output

```
1 // Online Java Compiler
2 // Use this editor to write, compile and run your Java code online
3
4 public class ArrayTraversal2D {
5     public static void main(String[] args) {
6         int[][] numbers = {{10, 20, 30}, {40, 50, 60}, {70, 80, 90}}; === Code Execution Successful ===
7     }
8
9     System.out.println("Matrix form:");
10    for (int i = 0; i < numbers.length; i++) {
11        for (int j = 0; j < numbers[i].length; j++) {
12            System.out.print(numbers[i][j] + " ");
13        }
14    }
15    System.out.println();
16 }
17 }
```

Matrix form:

10 20 30

40 50 60

70 80 90

Programiz

Online Java Compiler

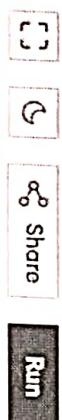


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Main.java



Output

Clear

```
1 // Base class (Parent class)
2- class Animal {
3-     void eat() {
4         System.out.println("Animal eats");
5     }
6 }
7
8 // Derived class (Child class)
9- class Dog extends Animal {
10-     void bark() {
11         System.out.println("Dog barks");
12     }
13 }
14
15 // This must be Main class for online compilers
16 public class Main {
17-     public static void main(String[] args) {
18-         Dog dog = new Dog();
19-         dog.eat(); // Inherited method
20-         dog.bark(); // Own method
21     }
22 }
23 }
```



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Run | Debug | Stop | Share | Save | Beaulify

```
Main.java :: 1 //Multilevel Inheritance program  
2 //Disawar Suraj Ashirwad  
3 //roll no - CS2140  
4 class Person {  
5     void details() {  
6         System.out.println("This is a person");  
7     }  
8 }  
9 class Citizen extends Person {  
10    void rights() {  
11        System.out.println("A citizen has voting rights");  
12    }  
13 }  
14 class LokSabhaSadasya extends Citizen {  
15    void duties() {  
16        System.out.println("LokSabha Sadasya represents people in the Parliament");  
17    }  
18 }  
19 public class Main {  
20     public static void main(String[] args) {  
21         LokSabhaSadasya member = new LokSabhaSadasya();  
22         member.details();  
23         member.rights();  
24         member.duties();  
25     }  
26 }  
27 }
```

input

This is a person  
A citizen has voting rights  
LokSabha Sadasya represents people in the Parliament

GDB...Program finished with exit code 0  
Press ENTER to exit console.

```
1 //Disawar Suraj Asnirwad
2 //roll no - CS2140
3 class Citizen {
4     void rights() {
5         System.out.println("A citizen has the right to vote");
6     }
7 }
8 class LokSabhaSadasya extends Citizen {
9     void representLokSabha() {
10        System.out.println("LokSabha Sadasya represents people in the Lok Sabha");
11    }
12 }
13 class RajyaSabhaSadasya extends Citizen {
14     void representRajyaSabha() {
15        System.out.println("RajyaSabha Sadasya represents people in the Rajya Sabha");
16    }
17 }
18 public class Main {
19     public static void main(String[] args) {
20         LokSabhaSadasya lok = new LokSabhaSadasya();
21         lok.rights();
22         lok.representLokSabha();
23         RajyaSabhaSadasya rajya = new RajyaSabhaSadasya();
24         rajya.rights();
25         rajya.representRajyaSabha();
26     }
27 }
28 }
29 }
```

input

```
A citizen has the right to vote
LokSabha Sadasya represents people in the Lok Sabha
A citizen has the right to vote
RajyaSabha Sadasya represents people in the Rajya Sabha
```

### Animal.java

```
1 //POLYMORPHISM OVERRIDING
2 //DISAWAR SURAJ ASHTIRWAD
3 //ROLL NO - CS2140
4 //CLASS - CSE SY (S2)
5 * class Animal {
6     void show() {
7         System.out.println("This is the Animal class");
8     }
9     public static void main(String[] args) {
10         Animal a1 = new Animal();
11         Dog d1 = new Dog();
12         Puppy p1 = new Puppy();
13         a1.show();
14         d1.show();
15         p1.show();
16         System.out.println("\nUsing Polymorphism:");
17         Animal ref;
18         ref = new Animal();
19         ref.show();
20         ref = new Dog();
21         ref.show();
22         ref = new Puppy();
23         ref.show();
```

Run

Output

This is the Animal class

This is the Dog class (Overridden method of Animal)

This is the Puppy class (Overridden method of Dog)

Using Polymorphism:

This is the Animal class

This is the Dog class (Overridden method of Animal)

This is the Puppy class (Overridden method of Dog)

==== Code Execution Successful ===

### Animal.java

```
1 //POLYMORPHISM OVERLOADING
2 //DISAWAR SURAJ ASHIRWAD
3 //ROLL NO - CS2140
4 //CLASS - CSE SY
5 class Animal {
6 void display() {
7 System.out.println("Display from Animal");
8 }
9 void display(int a) {
10 System.out.println("Display from Animal with number: " + a);
11 }
12 public static void main(String[] args) {
13 Puppy obj = new Puppy();
14 obj.display();
15 obj.display(40);
16 obj.display("Buddy");
17 obj.display(50);
18 }
19 }
20 class Dog extends Animal {
21 void display(String name) {
22 System.out.println("Display from Dog with name: " + name);
23 }
```

Run

Output

```
Display from Animal
Display from Animal with number: 40
Display from Dog with name: Buddy
Display from Animal with number: 50
```

```
==== Code Execution Successful ====
```

```
Main.java
1 //Programs On Arithmetic Exception Handling
2 //DISAWAR SURAJ ASHIRWAD
3 //ROLL NO - CS2140
4 //CLASS -CSE SY
5 class Main {
6     public static void main(String[] args) {
7         System.out.println("Main Start");
8         try {
9             System.out.println("Try Start");
10            int a = 2 * 5;
11            System.out.println("Result: " + a);
12            System.out.println("Try Ends");
13        }
14        catch (Exception e) {
15            System.out.println("Catch Block Executed");
16        }
17    }
18    finally {
19        System.out.println("Finally Block Executed");
20    }
21 }
22 }
```

Run Output  
Main Start  
Try Start  
Result: 10  
Try Ends  
Finally Block Executed

Main Ends  
==== Code Execution Successful ===

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### Main.java

```
1 //NULLPointerException
2 //DISAWAR SURAJ ASHIRWAD
3 //ROLL NO - CS2140
4 //CLASS -CSE SY

5 class Main {
6
7     public static void main(String[] args) {
8         System.out.println("Main Start");
9         try {
10             System.out.println("Try Start");
11             String s = null;
12             System.out.println(s.length());
13             System.out.println("Try Ends");
14         } catch (Exception e) {
15             System.out.println("Catch Block Executed");
16         }
17     finally {
18         System.out.println("Finally Block Executed");
19     }
20     System.out.println("Main Ends");
21 }
22 }
```

Run Share

Run

### Output

Main Start  
Try Start  
Catch Block Executed  
Finally Block Executed  
Main Ends

==== Code Execution Successful ===

### Main.java

```
1 //NULLPointerException  
2 //DISAWAR SURAJ ASHIRWAD  
3 //ROLL NO - CS2140  
4 //CLASS -CSE SY  
5  
6 public static void main(String[] args) {  
7     System.out.println("Start");  
8     try {  
9         int[] a = {101, 102, 211};  
10        System.out.println(a[1]);  
11    } catch (Exception e) {  
12        System.out.println("Catch Executed");  
13    } finally {  
14        System.out.println("Finally Executed");  
15    }  
16    System.out.println("End");  
17}  
18 }
```

Run

Output

==== Code Execution Successful ====  
Start  
102  
Finally Executed  
End

### Main.java

```
1 //Number Format Exception
2 //DISAWAR SURAJ ASHTIRWAD
3 //ROLL NO - CS2140
4 //CLASS -CSE SY
5 - class Main {
6 -     public static void main(String[] args) {
7         System.out.println("Start");
8         try {
9             int a = Integer.parseInt("1100");
10            System.out.println(a);
11            System.out.println("Catch not executed");
12        } catch (Exception e) {
13            System.out.println("Catch Executed");
14        }
15    } finally {
16        System.out.println("Finally Executed");
17    }
18 }
19 }
```

### Output

```
Start
1100
Catch not executed
Finally Executed
End
```

==== Code Execution Successful ===

### Run

### Share

### More

in.java

```
//Number Format Exception  
//DISAWAR SURAJ ASHIRWAD  
//ROLL NO - CS2140  
//CLASS -CSE SY
```

```
class Main {
```

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

```
        System.out.println("Start");
```

```
    try {
```

```
        int a = Integer.parseInt("IJKL");
```

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

```
    } catch (Exception e) {
```

```
        System.out.println("Catch not executed");
```

```
    } finally {
```

```
        System.out.println("Finally Executed");
```

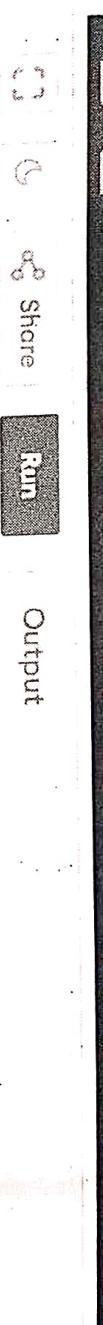
```
    }
```

```
    System.out.println("End");
```

```
    }
```

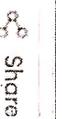
```
18 }
```

```
19 }
```



### Main.java

```
1 //Array Index Out of Bounds Exception
2 //DISAWAR SURAJ ASHIRWAD
3 //ROLL NO - CS2140
4 //CLASS -CSE SY
5 class Main {
6 public static void main(String[] args) {
7 System.out.println("Start");
8 try {
9 int[] a = {100, 102, 211};
10 System.out.println(a[2]);
11 } catch (Exception e) {
12 System.out.println("Catch Executed");
13 } finally {
14 System.out.println("Finally Executed");
15 }
16 System.out.println("End");
17 }
18 }
```



Output

```
=====
Start
211
Finally Executed
End
```

===== Code Execution Successful =====