
AssignmentsModule – 3 (Core Java)

1] W.A.J.P to Take three numbers from the user and print the greatest number.

```
package Assignment;

import java.util.Scanner;

public class First {

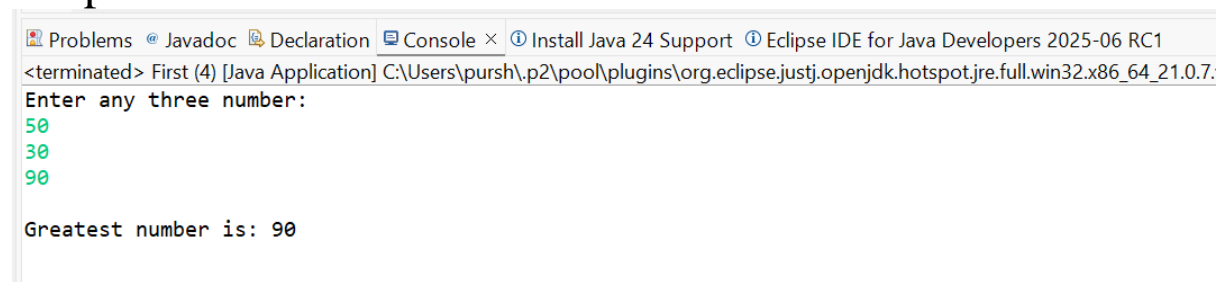
    public static void main(String[] args) {
        // TODO Auto-generated method stub

        System.out.println("Enter any three number: ");

        Scanner sc=new Scanner(System.in);
        int a=sc.nextInt();
        int b=sc.nextInt();
        int c=sc.nextInt();

        System.out.print("\nGreatest number is: ");
        if(a>b && a>c ) {
            System.out.println(a);
        }else if(b>c) {
            System.out.println(b);
        }else {
            System.out.println(c);
        }
    }
}
```

Output:

A screenshot of the Eclipse IDE's console window. The window title bar shows 'Problems', 'Javadoc', 'Declaration', 'Console', and 'Install Java 24 Support'. The console content shows the execution of the Java program. It starts with the prompt 'Enter any three number:', followed by three lines of input: '50', '30', and '90'. The final output line is 'Greatest number is: 90'.

```
<terminated> First (4) [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.
Enter any three number:
50
30
90

Greatest number is: 90
```

2] W.A.J.P in Java to display the first 10 natural numbers using while loop.

```

package Assignment;
public class Second {

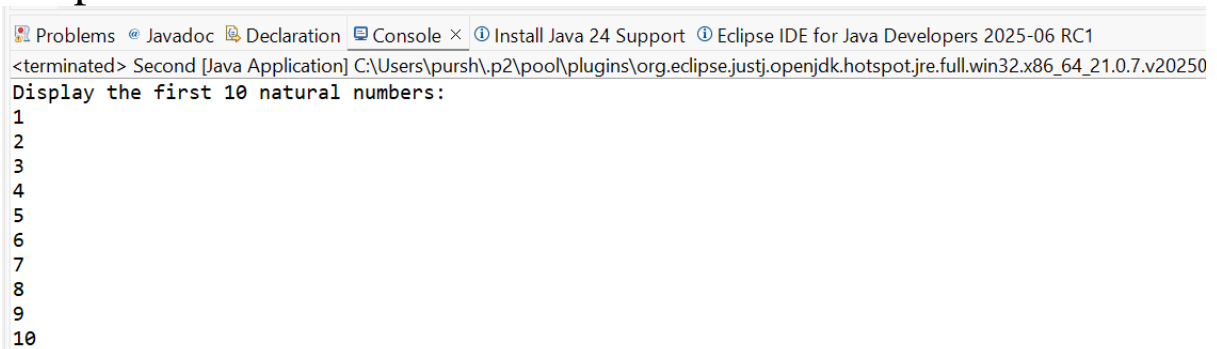
    public static void main(String[] args) {
        // TODO Auto-generated method stub

        System.out.println("Display the first 10 natural numbers: ");

        for(int i=1; i<=10; i++) {
            System.out.println(i);
        }
    }
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The console output displays the text 'Display the first 10 natural numbers:' followed by the numbers 1 through 10, each on a new line. The IDE title bar indicates the project is 'Second [Java Application]' and the path is 'C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250'.

```

Problems @ Javadoc Declaration Console × Install Java 24 Support Eclipse IDE for Java Developers 2025-06 RC1
<terminated> Second [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250
Display the first 10 natural numbers:
1
2
3
4
5
6
7
8
9
10

```

3] W.A.J.P to find factorial for Given Number.

```

package Assignment;

import java.util.Scanner;

class Fact{

    int fact=1;
    void disp(int a) {

        for(int i=1; i<=a; i++) {
            fact = fact*i;
        }
        System.out.println("Factorial of "+a+" is: "+fact);
    }
}

public class Factorial {

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

        Scanner sc=new Scanner(System.in);

        System.out.print("Enter any number: ");
        int ui=sc.nextInt();
    }
}

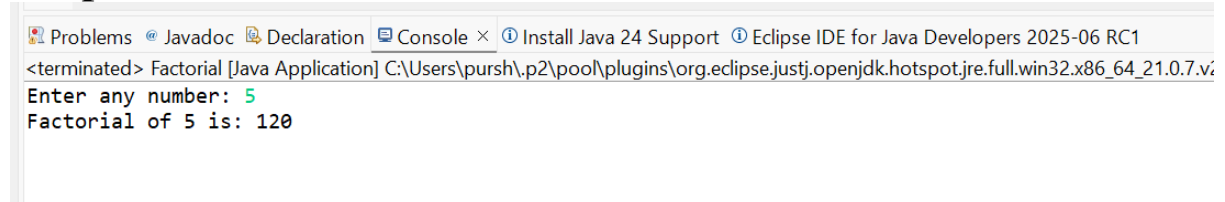
```

```

        Fact fa=new Fact();
        fa.disp(ui);
    }
}

```

Output:



4] W.A.J.P to check given number is Prime or not?

```

package Assignment;

import java.util.Scanner;

public class Prime {

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

        Scanner sc=new Scanner(System.in);

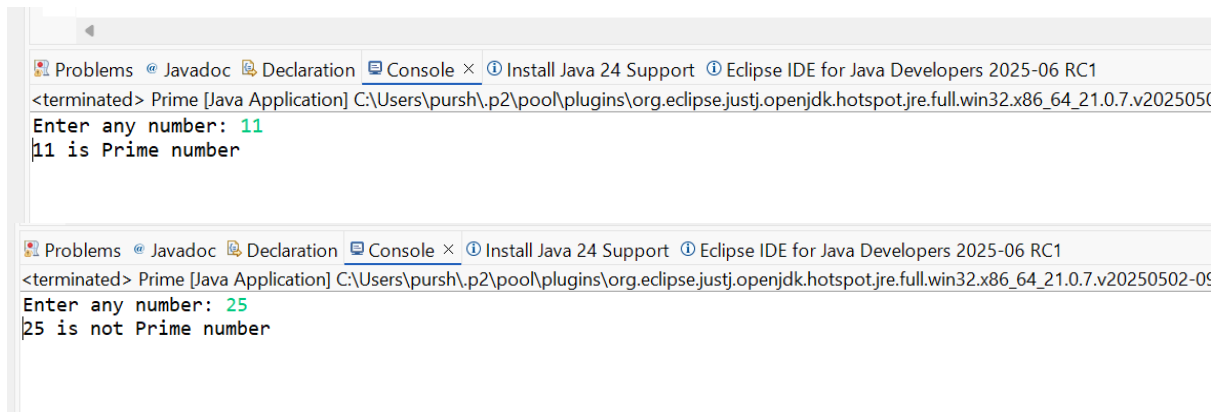
        System.out.print("Enter any number: ");
        int num=sc.nextInt();
        int count=0;

        for(int i=1; i<=num; i++) {
            if(num % i == 0) {
                count++;
            }
        }

        if(count==2) {
            System.out.println(num+" is Prime number");
        }else {
            System.out.println(num+" is not Prime number");
        }
    }
}

```

Output:



```
<terminated> Prime [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-05
Enter any number: 11
11 is Prime number

<terminated> Prime [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-05
Enter any number: 25
25 is not Prime number
```

5] W.A.J.P to check given number is Armstrong or not?

```
package Assignment;

import java.util.Scanner;

public class Armstrong {

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

        Scanner sc=new Scanner(System.in);

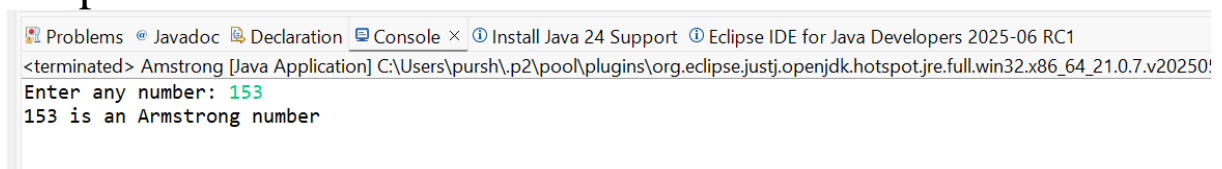
        System.out.print("Enter any number: ");
        int num=sc.nextInt();

        int backUP=num;
        int sum=0;

        while(num>0) {
            sum = sum + (num%10)*(num%10)*(num%10);
            num = num/10;
        }

        if(sum==backUP) {
            System.out.println(backUP + " is an Armstrong number");
        }
        else {
            System.out.println(backUP + " is NOT an Armstrong number");
        }
    }
}
```

Output:



```
<terminated> Armstrong [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-05
Enter any number: 153
153 is an Armstrong number
```

```
Problems Javadoc Declaration Console × Install Java 24 Support Eclipse IDE for Java Developers 2025-06 RC1
<terminated> Armstrong [Java Application] C:\Users\pursh.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250
Enter any number: 121
121 is NOT an Armstrong number
```

6] W.A.J.P for create Fibonacci Series.

```
package Assignment;

public class Fibonacci {

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

        int n1=0, n2=1;
        int sum=0;

        System.out.print("Fibonacci Series is: "+n1+" "+n2);

        for(int i=0; i<10; i++)
        {
            sum = n1+n2;
            System.out.print(" "+sum); //1, 2
            n1=n2; //1
            n2=sum; //1
        }
    }
}
```

Output:

```
Problems Javadoc Declaration Console × Install Java 24 Support Eclipse IDE for Java Developers 2025-06 RC1
<terminated> Fibonacci [Java Application] C:\Users\pursh.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502
Fibonacci Series is: 0 1 1 2 3 5 8 13 21 34 55 89
```

7] W.A.J.P to Print pattern Given Below.

I] Pattern1:

```
package Assignment;

public class Pattern1 {

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

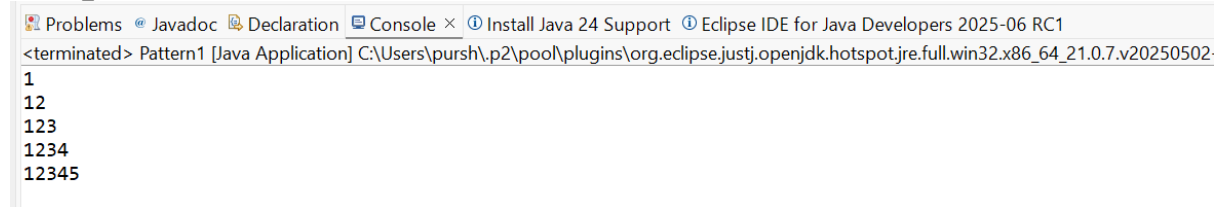
        for(int i=1; i<=5; i++) { // row
```

```

        for(int j=1; j<=i; j++) { //column
            System.out.print(j);
        }
        System.out.println();
    }
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The output of the Java application 'Pattern1' is displayed as follows:

```

1
12
123
1234
12345

```

II] Pattern2:

```

package Assignment;

public class Pattern1 {

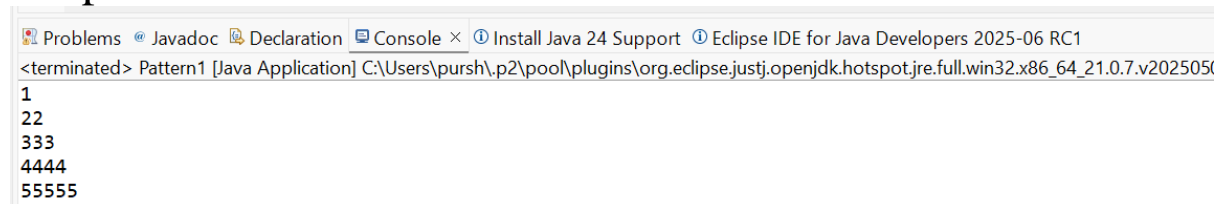
    public static void main(String[] args) {
        // TODO Auto-generated method stub

        for(int i=1; i<=5; i++) { // row

            for(int j=1; j<=i; j++) { //column
                System.out.print(i);
            }
            System.out.println();
        }
    }
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The output of the Java application 'Pattern1' is displayed as follows:

```

1
22
333
4444
55555

```

III] Pattern3:

```

package Assignment;

public class Pattern3 {

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

```

```

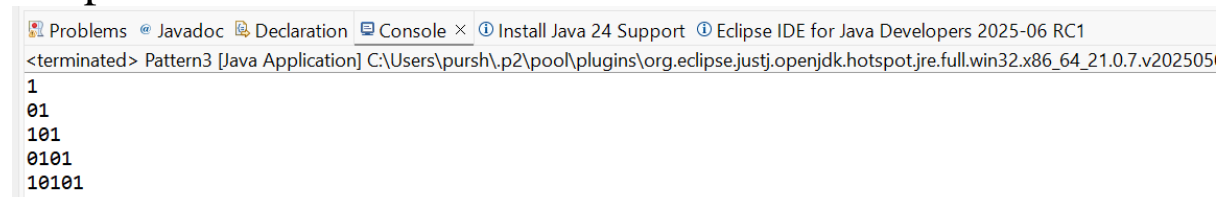
int count=0;
for(int i=1; i<=5; i++) {

    for(int j=1; j<=i; j++) {

        count= i+j;
        if(count % 2==0) {
            System.out.print(1);
        }else {
            System.out.print(0);
        }
    }
    System.out.println();
}
}
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The console output displays the following pattern:

```

1
01
101
0101
10101

```

IV] Pattern4:

```
package Assignment;
```

```
public class Pattern4 {
```

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

```

```
        int length=4;
```

```
        for(int i=1; i<=length; i++) {
```

```
            for(int j=length-i; j>=1; j--) {
                System.out.print(" ");
            }

```

```
            for(int k=1; k<=i; k++) {
                System.out.print(i+" ");
            }

```

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

```

Output:

```
Problems @ Javadoc Declaration Console × Eclipse IDE for Java Developers 2025-06 Release
<terminated> Pattern4 [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v2025050
1
2 2
3 3 3
4 4 4 4
```

V] Pattern5:

```
package Assignment;
```

```
public class Pattern5 {
```

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

```
        int length=3;
```

```
        for(int i=1; i<=length; i++) {
```

```
            for(int j=1; j<=length-i; j++) {
                System.out.print(" ");
```

```
            }
            for(int j=1; j<=2*i-1; j++) {
                System.out.print("* ");
```

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

```
        }
```

```
        for(int i=length-1; i>=1; i--) {
```

```
            for(int j=1; j<=length-i; j++) {
                System.out.print(" ");
```

```
            }
            for(int j=1; j<=2*i-1; j++) {
                System.out.print("* ");
```

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

```
        }
```

```
    }
```

```
}
```

Output:

```
Problems @ Javadoc Declaration Console × Eclipse IDE for Java Developers 2025-06 Release
<terminated> Pattern5 [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-05
*
* * *
* * * * *
* * *
*
```

8] WAP to compute the sum of the first 100 prime numbers.


```

package Assignment;

public class SumOfPrime {

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

        int n=100;
        int sum=0;

        for(int i=1; i<=n; i++) {

            int count=0;
            for(int j=1; j<=n; j++) {
                if(i%j==0) {
                    count++;
                }
            }

            if(count==2) {
                sum +=i;
            }
        }
        System.out.println("1 to 100 Prime number sum is: "+sum);
    }
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The output of the Java application is displayed as follows:

```

<terminated> SumOfPrime [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v2025050
1 to 100 Prime number sum is: 1060

```

9] WAP to sum values of an array.

```

package Assignment;

public class SumArrayElement {

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

        int arr[]= {1,2,3,4,5};
        int sum=0;
        for(int i=0; i<arr.length; i++) {
            sum += arr[i];
        }
        System.out.println("Sum of array element is: "+sum);
    }
}

```

Output:

```
Problems Javadoc Declaration Console × Eclipse IDE for Java Developers 2025-06 Release
<terminated> SumArrayElement [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250610
Sum of array element is: 15
```

10] WAP to calculate the average value of array elements.

```
package Assignment;

import java.util.Scanner;

public class AverageOfArray {

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

        int a[]=new int[5];
        int sum=0;

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter Array elements: ");

        for(int i=0; i<5; i++) {
            a[i]=sc.nextInt();
        }
        for(int i=0; i<5; i++) {
            sum +=a[i];
        }
        double average=sum/5.0;

        System.out.println("Avege of array element is: "+average);
    }
}
```

Output:

```
Problems Javadoc Declaration Console × Eclipse IDE for Java Developers 2025-06 Release
<terminated> AverageOfArray [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250610
Enter Array elements:
10
20
30
40
50
Avege of array element is: 30.0
```

11] WAP to find the index of an array element.

```
package Assignment;

import java.util.Scanner;

public class IndexOfArray {
```

```

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

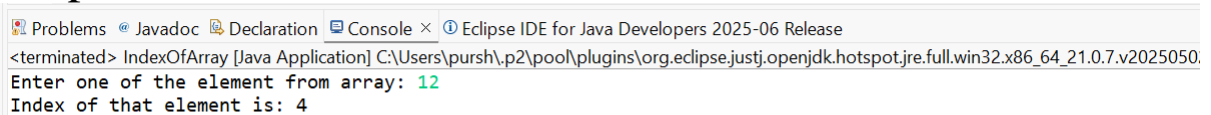
    int a[]= {2,4,8,10,12,14,18};
    Scanner sc= new Scanner(System.in);

    System.out.print("Enter one of the element from array: ");
    int value=sc.nextInt();

    for(int i=0; i<a.length; i++) {
        if(a[i]==value) {
            System.out.println("Index of that element is: "+i);
        }
    }
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The output text is as follows:

```

<terminated> IndexOfArray [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v2025050
Enter one of the element from array: 12
Index of that element is: 4

```

12] WAP to find the maximum and minimum value of an array.

```

package Assignment;

import java.util.Scanner;

public class MaxMinArray {

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

        int a[]=new int[5];

        Scanner sc=new Scanner(System.in);

        System.out.println("Enter 5 array elements: ");
        for(int i=0; i<a.length; i++) {
            a[i]=sc.nextInt();
        }

        int max=a[0];
        for(int i=0; i<a.length; i++) {
            if(a[i]>max) {
                max=a[i];
            }
        }
        System.out.println("Maximum number is: "+max);

        int min=a[0];
    }
}

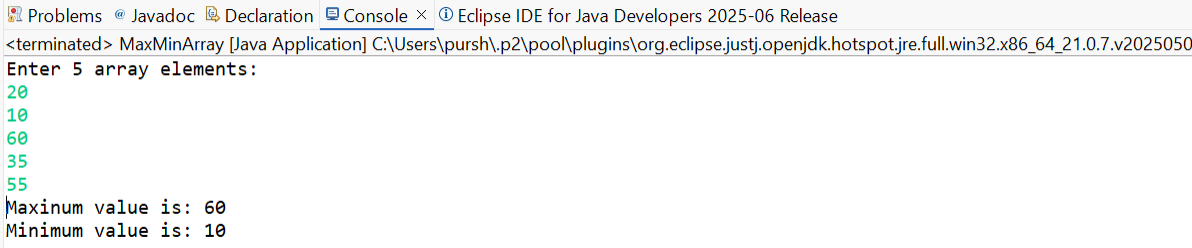
```

```

        for(int i=0; i<a.length; i++) {
            if(a[i]<min) {
                min=a[i];
            }
        }
        System.out.println("Minimum number is: "+min);
    }
}

```

Output:



```

Problems Javadoc Declaration Console × Eclipse IDE for Java Developers 2025-06 Release
<terminated> MaxMinArray [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502
Enter 5 array elements:
20
10
60
35
55
Maximum value is: 60
Minimum value is: 10

```

13] WAP to Compare Two String.

```

package Assignment;

public class CompareString {

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

        String s1="Riddhi";
        String s2=new String("Riddhi");

        if(s1.equals(s2)) {
            System.out.println("Match");
        }else {
            System.out.println("Not Match");
        }
    }
}

```

Output:



```

Problems Javadoc Declaration Console × Eclipse IDE for Java Developers 2025-06 Release
<terminated> CompareString [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502
Match

```

14] WAP to concatenate a given string to the end of another string.

```

package Assignment;

import java.util.Scanner;

```

```

public class ConcatString {

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

        Scanner sc= new Scanner(System.in);
        System.out.println("Enter any string: ");
        String a= sc.nextLine();

        String con = a.concat(" How are you?");
        System.out.println(con);
    }

}

```

Output:



```

Eclipse IDE for Java Developers 2025-06 Release
<terminated> ConcatString [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250506
Enter any string:
Hello riddhi
Hello riddhi How are you?

```

15] WAP to demonstrate try catch block.

```

package Exception;

public class TestException {

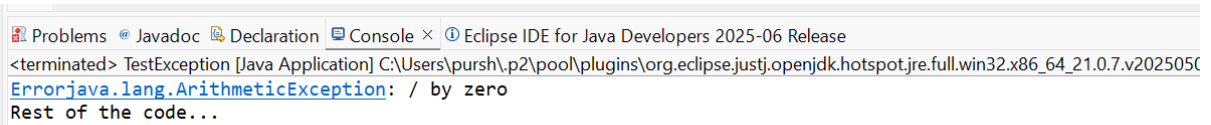
    public static void main(String[] args) {
        // TODO Auto-generated method stub

        try {
            int data=50/0;
            System.out.println("Hello: "+data);
        }catch(ArithmeticException e) {
            System.out.println("Error"+e);
        }
        System.out.println("Rest of the code...");
    }

//    int a=10;
//    int b=0;
//    System.out.println("division is "+(a/b));
//    System.out.println("Hello ");
}

```

Output:

A screenshot of the Eclipse IDE's console window. The title bar shows 'Problems', 'Javadoc', 'Declaration', 'Console', and 'Eclipse IDE for Java Developers 2025-06 Release'. The console text reads: '<terminated> TestException [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250505\Errorjava.lang.ArithmeticException: / by zero' followed by 'Rest of the code...'.

```
<terminated> TestException [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250505\Errorjava.lang.ArithmeticException: / by zero
Rest of the code...
```

16] WAP to demonstrate multiple catch blocks

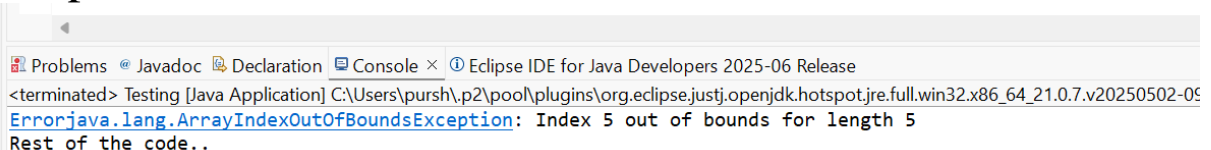
```
package Exception;

public class Testing {

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

        int arr[]=new int[5];
        try {
            arr[5]=10;
            System.out.println("hello");
        }catch(ArithmeticException e){ //always first mention child class
            System.out.println("Error"+e);
        }catch(Exception e){ //always parent class is mention in last
            System.out.println("Error"+e);
        }
        System.out.println("Rest of the code..");
    }
}
```

Output:

A screenshot of the Eclipse IDE's console window. The title bar shows 'Problems', 'Javadoc', 'Declaration', 'Console', and 'Eclipse IDE for Java Developers 2025-06 Release'. The console text reads: '<terminated> Testing [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-05\Errorjava.lang.ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 5' followed by 'Rest of the code..'.

```
<terminated> Testing [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-05\Errorjava.lang.ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 5
Rest of the code..
```

17] WAP to create one thread by implementing Runnable interface in Class.

```
package Thraed;

class Thread2 implements Runnable{

    @Override
    public void run() {
        // TODO Auto-generated method stub
        System.out.println("Thread is rumming..");
    }

}

public class ThreadImplement {
```

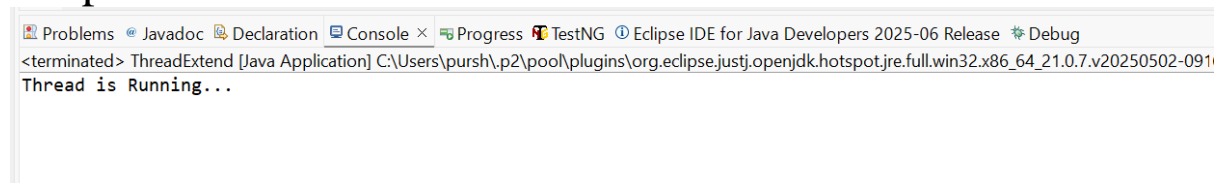
```

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

        Thread2 m1=new Thread2();
        Thread t1=new Thread(m1);
        //Thread class che default parent aene to
        object banai ne start method call karvi j padse
        t1.start();
    }
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The output text is '<terminated> ThreadExtend [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-091 Thread is Running...'.

18] WAP to create one thread by extending Thread class in another Class.

```

package Thraed;

class Thread1 extends Thread{

    public void run() { //automatically invoked
        test1();
    }

    void test1() {
        System.out.println("Thread is Running...");
    }
}

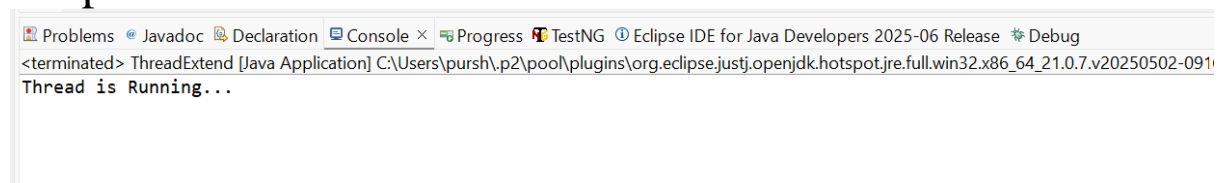
public class ThreadExtend {

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

        Thread1 t1=new Thread1();
        t1.start();
    }
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The output text is '<terminated> ThreadExtend [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-091 Thread is Running...'.

19] WAP to iterate through all elements in an array list.

```
package Collection;

import java.util.ArrayList;
import java.util.Iterator;
import java.util.List;

public class ListArraylist {

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

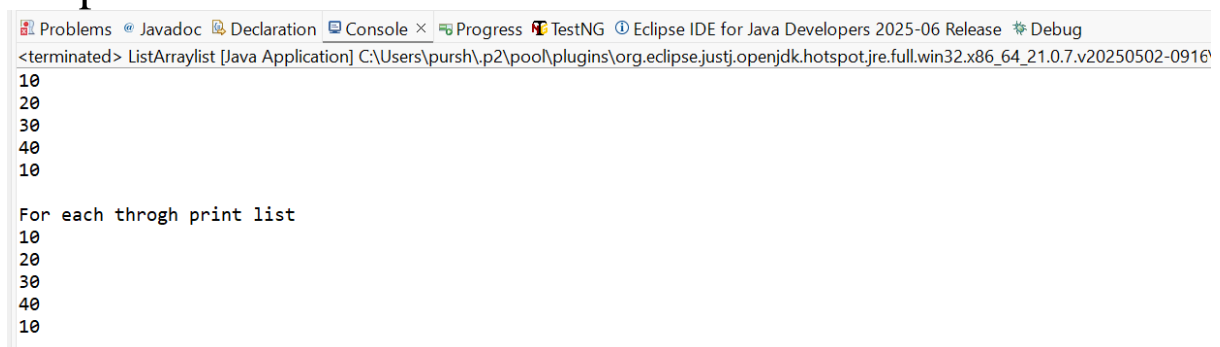
        List<Integer> ls=new ArrayList<>(); //integer values
        ls.add(10);
        ls.add(20);
        ls.add(30);
        ls.add(40);
        ls.add(10); //list allows duplicate values

        //System.out.println(ls);

        //iterator interface one by one list ni values ne print karse
        Iterator itr=ls.iterator();
        while(itr.hasNext()) {
            System.out.println(itr.next());
        }

        //second way to print list values in one by one is Foreach loop
        System.out.println("\nFor each throgh print list");
        for(int obj:ls) {
            System.out.println(obj);
        }
    }
}
```

Output:



```
Problems Javadoc Declaration Console × Progress TestNG Eclipse IDE for Java Developers 2025-06 Release Debug
<terminated> ListArraylist [Java Application] C:\Users\pursh.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916
10
20
30
40
10

For each throgh print list
10
20
30
40
10
```

20] WAP to update specific array element by given element.

```
package Collection;

import java.util.ArrayList;
```



```

import java.util.Iterator;
import java.util.List;

public class ListArraylist {

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

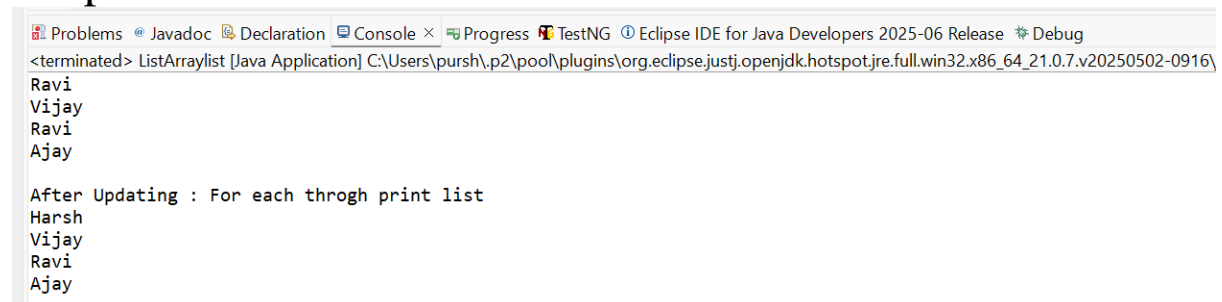
        ArrayList<String> ls=new ArrayList<>(); //String values
        ls.add("Ravi"); //adding object in arraylist
        ls.add("Vijay");
        ls.add("Ravi");
        ls.add("Ajay");
        //Traversig list through Iterator
        Iterator itr=ls.iterator();
        while(itr.hasNext()) {
            System.out.println(itr.next());
        }

        //Index 0 set "Harsh" in arraylist
        ls.set(0,"Harsh");

        System.out.println("\nAfter Updating : For each throgh print list");
        //second way to print list values in one by one is Foreach loop
        for(String obj:ls) {
            System.out.println(obj);
        }
    }
}

```

Output:



```

<terminated> ListArraylist [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916\
Ravi
Vijay
Ravi
Ajay

After Updating : For each throgh print list
Harsh
Vijay
Ravi
Ajay

```

21] WAP to remove the third element from a array list.

```

package Collection;

import java.util.ArrayList;
import java.util.Iterator;
import java.util.List;

public class ListArraylist {

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

```

```

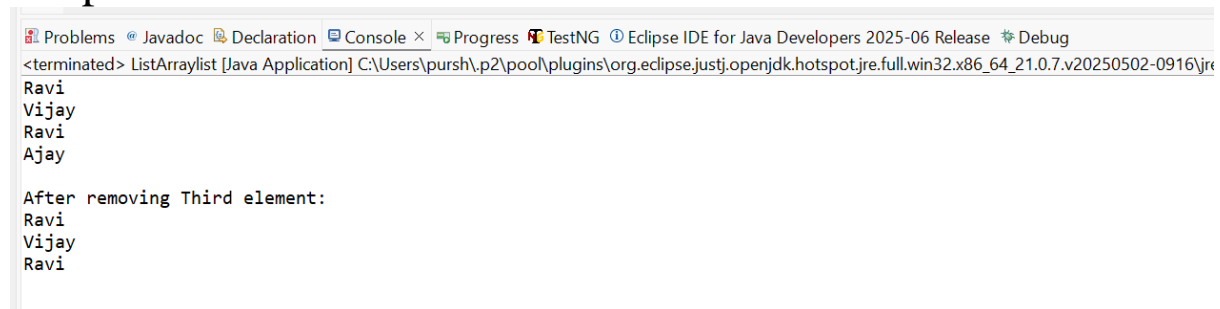
ArrayList<String> ls=new ArrayList<>(); //String values
ls.add("Ravi"); //adding object in arraylist
ls.add("Vijay");
ls.add("Ravi");
ls.add("Ajay");
//Traversig list through Iterator
Iterator itr=ls.iterator();
while(itr.hasNext()) {
    System.out.println(itr.next());
}

//Remove Third element from array
ls.remove(3);

System.out.println("\nAfter removing Third element: ");
//second way to print list values in one by one is Foreach loop
for(String obj:ls) {
    System.out.println(obj);
}
}
}

```

Output:



```

<terminated> ListArraylist [Java Application] C:\Users\pursh.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916\jre
Ravi
Vijay
Ravi
Ajay

After removing Third element:
Ravi
Vijay
Ravi

```

22] WAP to Copy one array into another.

```

package Assignment;

import java.util.Scanner;

public class CopyArray {

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

        int a[]=new int[5];
        int b[]=new int[5];

        Scanner sc= new Scanner(System.in);
        System.out.println("Enter 5 array elements: ");
        for(int i=0; i<a.length; i++) {
            a[i]=sc.nextInt();
        }
        System.out.print("First array Elements: ");
        for(int i=0; i<a.length; i++) {

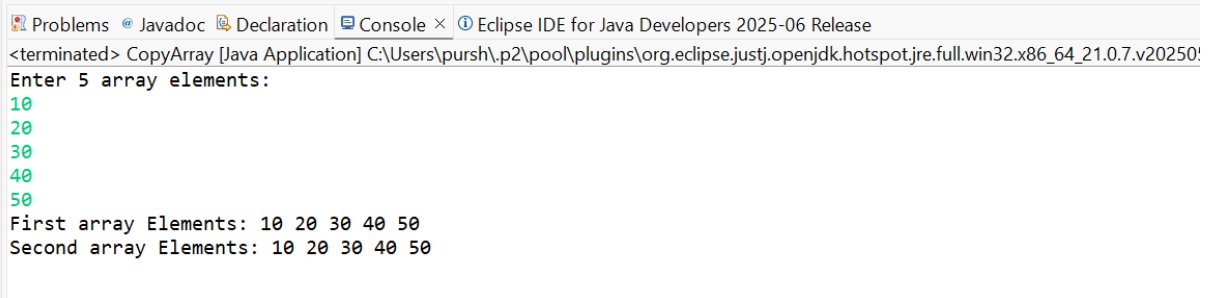
```

```

        System.out.print(a[i]+" ");
    }
    System.out.print("\nSecond array Elements: ");
    for(int i=0; i<a.length; i++) {
        b[i]=a[i];
        System.out.print(b[i]+" ");
    }
}
}

```

Output:



```

Problems  Javadoc  Declaration  Console ×  Eclipse IDE for Java Developers 2025-06 Release
<terminated> CopyArray [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250!
Enter 5 array elements:
10
20
30
40
50
First array Elements: 10 20 30 40 50
Second array Elements: 10 20 30 40 50

```

23] WAP to reverse an array of integer values.

```

package Assignment;

import java.util.Scanner;

public class RevrseArray {

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

        int a[]=new int[5];

        Scanner sc= new Scanner(System.in);
        System.out.println("Enter 5 array elements: ");
        for(int i=0; i<a.length; i++) {
            a[i]=sc.nextInt();
        }
        System.out.print("Array Elements: ");
        for(int i=0; i<a.length; i++) {
            System.out.print(a[i]+" ");
        }
        System.out.print("\nArray Reverse Elements: ");
        for(int i=a.length-1; i>=0; i--) {
            System.out.print(a[i]+" ");
        }
    }
}

```

Output:

```
Problems Javadoc Declaration Console Eclipse IDE for Java Developers 2025-06 Release
<terminated> RevrseArray [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v2025050
Enter 5 array elements:
10
20
30
40
50
Array Elements: 10 20 30 40 50
Array Reverse Elements: 50 40 30 20 10
```

24] WAP to find the second largest element in an array.

```
package Assignment;

public class SecondLargestArray {

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

        int a[] = {4,8,1,2,7,9};
        int temp;

        for(int i=0; i<a.length; i++) {
            for(int j=i+1; j<a.length; j++) {
                if(a[i]<a[j]) {
                    temp=a[i];
                    a[i]=a[j];
                    a[j]=temp;
                }
            }
        }

        // for(int i=0; i<a.length; i++) {
        //     System.out.print(a[i]+" ");
        // }
        System.out.println("Second Largest array element is: "+a[1]);
    }
}
```

Output:

```
Problems Javadoc Declaration Console Eclipse IDE for Java Developers 2025-06 Release
<terminated> SecondLargestArray [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20
Second Largest array element is: 8
```

25] W.A.J.P. Create an abstract class 'Parent' with a method 'message'. It has two subclasses each having a method with the same name 'message' that prints "This is first subclass" and "This is second subclass" respectively. Call the methods 'message' by creating an object for each subclass.

```
package Abstract;

abstract class Parent{
    abstract void message();
}
```

```

}

class sub1 extends Parent{
    void message() {
        System.out.println("This is First subclass");
    }
}

class sub2 extends Parent{
    void message() {
        System.out.println("This is Second subclass");
    }
}

public class Program {

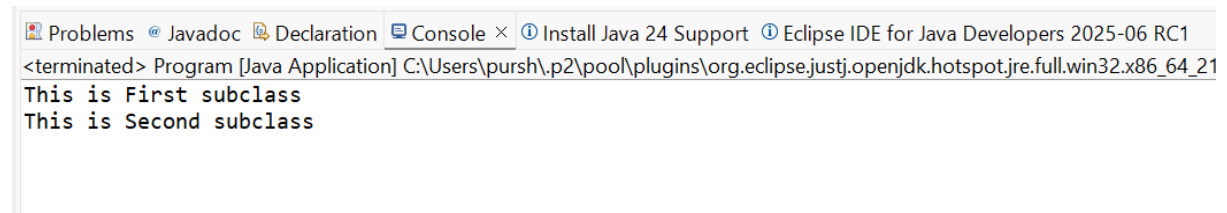
    public static void main(String[] args) {
        // TODO Auto-generated method stub

        sub1 s1=new sub1();
        sub2 s2=new sub2();

        s1.message();
        s2.message();
    }
}

```

Output:



The screenshot shows the Eclipse IDE interface with the 'Console' tab selected. The console output displays the results of the Java program execution: '<terminated> Program [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21', followed by 'This is First subclass' and 'This is Second subclass' on separate lines.

```

<terminated> Program [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21
This is First subclass
This is Second subclass

```

26] W.A.J.P. which will ask the user to enter his/her marks (out of 100). Define a method that will display grades according to the marks entered as below:

| Marks | Grade |
|--------|-------|
| 91-100 | AA |
| 81-90 | AB |
| 71-80 | BB |
| 61-70 | BC |
| 51-60 | CD |
| 41-50 | DD |
| <=40 | Fail |

```

package Assignment;
import java.util.Scanner;

public class StudentGrade {

```

```

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

    Scanner sc=new Scanner(System.in);

    System.out.print("Enter your marks out of 100: ");
    int marks= sc.nextInt();

    if(marks>90 && marks<=100) {
        System.out.println("Grade is: AA");
    }else if(marks>80 && marks<=90) {
        System.out.println("Your Grade is: AB");
    }else if(marks>70 && marks<=80) {
        System.out.println("Your Grade is: BB");
    }else if(marks>60 && marks<=70) {
        System.out.println("Your Grade is: BC");
    }else if(marks>50 && marks<=60) {
        System.out.println("Your Grade is: CD");
    }else if(marks>40 && marks<=50) {
        System.out.println("Your Grade is: DD");
    }else {
        System.out.println("You are Fail");
    }
}
}

```

Output:

The image shows two screenshots of the Eclipse IDE console. The first screenshot shows the program running with the input '81' and the output 'Your Grade is: AB'. The second screenshot shows the program running with the input '40' and the output 'You are Fail'.

27] W.A.J.P. to create a custom exception if Customer withdraw amount which is greater than account balance then program will show custom exception otherwise amount will deduct from account balance.

Account balance is:2000

Enter withdraw amount:2500

Sorry, insufficient balance, you need more 500 Rs.

To perform this transaction.

```

package Assignment;

import java.util.Scanner;

//Custom exception class
class InsufficientBalanceException extends Exception {

```

```

        InsufficientBalanceException(String message) {

            super(message);
        }
    }

    public class CustomExceptionATM {

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

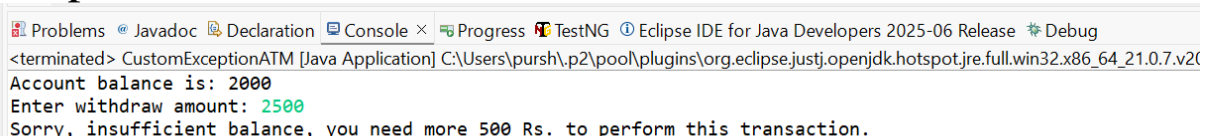
            int balance = 2000;

            Scanner sc = new Scanner(System.in);
            System.out.println("Account balance is: " + balance);
            System.out.print("Enter withdraw amount: ");
            int amount = sc.nextInt();

            try {
                if (amount > balance) {
                    int diff = amount - balance;
                    throw new InsufficientBalanceException("Sorry, insufficient
balance, you need more " + diff + " Rs. to perform this transaction.");
                } else {
                    balance -= amount;
                    System.out.println("Withdrawal successful! Remaining balance: " +
balance + " Rs.");
                }
            } catch (InsufficientBalanceException e) {
                System.out.println(e.getMessage());
            }
        }
    }
}

```

Output:



```

Problems Javadoc Declaration Console × Progress TestNG Eclipse IDE for Java Developers 2025-06 Release Debug
<terminated> CustomExceptionATM [Java Application] C:\Users\pursh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v2(
Account balance is: 2000
Enter withdraw amount: 2500
Sorry, insufficient balance, you need more 500 Rs. to perform this transaction.

```