Assignment No-9
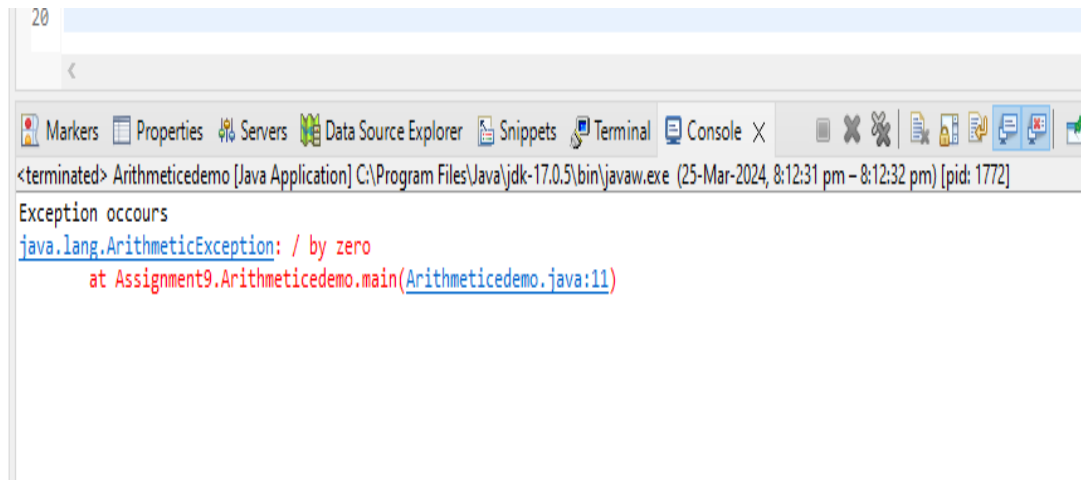
1. Write a Java program that throws an arithmetic exception and catch it using a try-catch block.

```java
package Assignment9;



public class Arithmeticedemo {


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

        int a,b,c;

        a=10;

        b=0;

        c=a/b;

    }
    catch(ArithmeticException e) {

        System.out.println("Exception occours");

        e.printStackTrace();

    }
    }


}
```
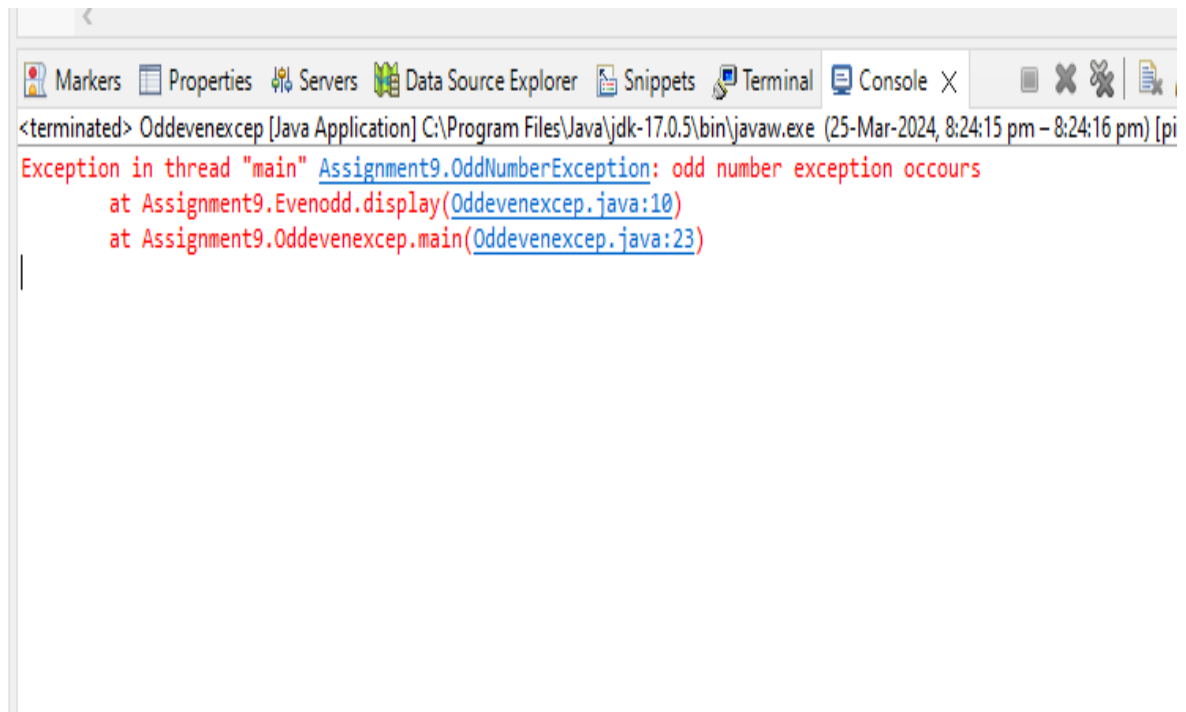
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```
<terminated> Arithmeticedemo [Java Application] C:\Program Files\Java\jdk-17.0.5\bin\javaw.exe (25-Mar-2024, 8:12:31 pm – 8:12:32 pm) [pid: 1772]
Exception occours
java.lang.ArithmeticException: / by zero
        at Assignment9.Arithmeticedemo.main(Arithmeticedemo.java:11)
```

2. Write a Java program to create a method that takes an integer as a parameter and throws an exception if the number is odd.

```java
package Assignment9;
class OddNumberException extends RuntimeException{
    OddNumberException(String msg){
        super(msg);
    }
}
class Evenodd{
    public void display(int n) throws OddNumberException{
        if(n%2!=0) {
            throw new OddNumberException("odd number exception occours");
        }
        else {
            System.out.println("number is even");
```

```
                }
            }
}
public class Oddevenexcep {


        public static void main(String[] args) {
                // TODO Auto-generated method stub
        int n = 21;
        Evenodd ev = new Evenodd();
        ev.display(n);
            }


}
```

```
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<terminated> Oddevenexcep [Java Application] C:\Program Files\Java\jdk-17.0.5\bin\javaw.exe (25-Mar-2024, 8:24:15 pm – 8:24:16 pm) [pi
Exception in thread "main" Assignment9.OddNumberException: odd number exception occours
        at Assignment9.Evenodd.display(Oddevenexcep.java:10)
        at Assignment9.Oddevenexcep.main(Oddevenexcep.java:23)
```

3. Write a Java program throws an array index out of bound exception.

package Assignment9;

public class Demoarrayindex {

```java
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        try {
//
            int arr[] = {16,9,10,11};
            System.out.println(arr[5]);
        } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println("Caught ArrayIndexOutOfBoundsException: " + e.getMessage());
            e.printStackTrace();
        }
    }

}
```
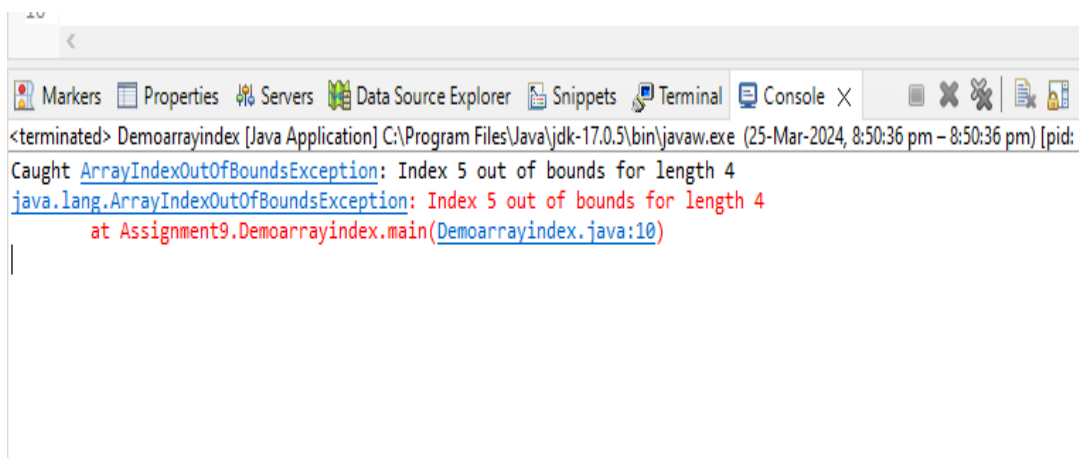
```
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<terminated> Demoarrayindex [Java Application] C:\Program Files\Java\jdk-17.0.5\bin\javaw.exe (25-Mar-2024, 8:50:36 pm – 8:50:36 pm) [pid:
Caught ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 4
java.lang.ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 4
        at Assignment9.Demoarrayindex.main(Demoarrayindex.java:10)
```
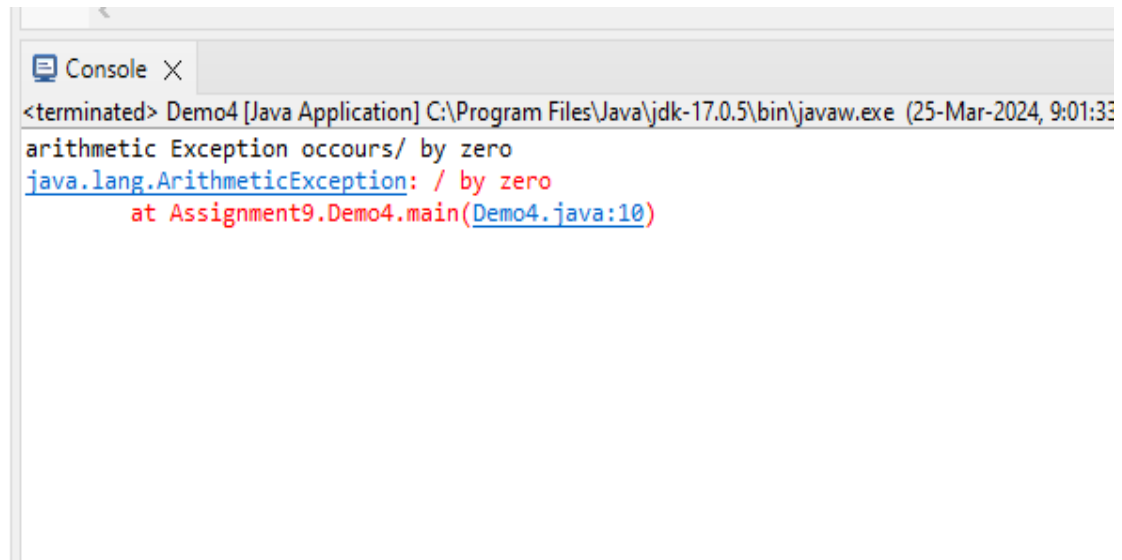
4. Write a code for arithmetic exception using one try block & multiple catch block & check which catch block handle that exception.

```java
public class Demo4 {

     public static void main(String[] args) {
            try {
    int a,b,c;
    a = 20;
    b =0;
    c = a/b;
    System.out.println(c);
     }
            catch(ArrayIndexOutOfBoundsException e) {
                    System.out.println("exception occours: "+e.getMessage());
                    e.printStackTrace();
            }
            catch(ArithmeticException e) {
                    System.out.println("arithmetic Exception
occours"+e.getMessage());
                    e.printStackTrace();
            }
            catch(Exception e) {
                    e.getMessage();
                    e.printStackTrace();
            }
}}
```

🖥 Console ✕

<terminated> Demo4 [Java Application] C:\Program Files\Java\jdk-17.0.5\bin\javaw.exe (25-Mar-2024, 9:01:33

```
arithmetic Exception occours/ by zero
java.lang.ArithmeticException: / by zero
        at Assignment9.Demo4.main(Demo4.java:10)
```

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