

Subject : OOP

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Date of Performance :

Assignment No.6

Aim : Exception handling

Implement a program to handle Arithmetic exception, Array Index Out Of Bounds. The user enters two numbers Num1 and Num2. The division of Num1 and Num2 is displayed. If Num1 and Num2 were not integers, the program would throw a Number Format Exception. If Num2 were zero, the program would throw an Arithmetic Exception. Display the exception.

Input :

ExceptionDemo.java

```
import java.util.Scanner;
public class ExceptionDemo
{
    int num1,num2,div;
    Scanner sc=new Scanner(System.in);
    public void divByZero()
    {
        System.out.println ("Enter First Number :");
        num1=Integer.parseInt(sc.next());
        System.out.println ("Enter second Number :");
        num2=Integer.parseInt(sc.next());
        div=num1/num2;
        System.out.println ("Result: " + div);
    }
    public void arrayIndexOutOfBounds()
    {
        int n;
        System.out.println ("Enter Array Size:");
        n=sc.nextInt();
        int a[]=new int[n];
        for(int i=0; i<=n; i++)
        {
            System.out.println ("Enter Element"+i+" :");
            a[i]=sc.nextInt();
        }
    }
    public static void main(String[] args)
    {
        ExceptionDemo d=new ExceptionDemo();
    }
}
```

```
try
{
d.divByZero();
d.arrayIndexOutOfBounds();
}
catch(ArrayIndexOutOfBoundsException e)
{
System.out.println ("Array index out of Bound exception
occured");
}
catch(NumberFormatException e)
{
System.out.println ("Number format exception occured");
}
catch(ArithmeticException e)
{
System.out.println ("Arithmetic Exception occured");
}
catch(Exception e)
{
System.out.println ("Exception occured");
}
System.out.println ("Out of try-catch block..");
}
}
```

Output :

```
C:\Users\admin>javac ExceptionDemo.java
```

```
C:\Users\admin>java ExceptionDemo
```

```
Enter First Number :
```

```
11
```

```
Enter second Number :
```

```
18
```

```
Result: 0
```

```
Enter Array Size:
```

```
5
```

```
Enter Element0 :
```

```
1
```

```
Enter Element1 :
```

```
2
```

```
Enter Element2 :
```

```
3
```

```
Enter Element3 :
```

```
4
```

```
Enter Element4 :
```

```
5
```

```
Enter Element5 :
```

```
6
```

```
Array index out of Bound exception occurred
```

```
Out of try-catch block..
```

```
C:\Users\admin>java ExceptionDemo
```

```
Enter First Number :
```

```
3
```

```
Enter second Number :
```

```
0
```

```
Arithmetic Exception occurred
```

Out of try-catch block..

```
C:\Users\admin>java ExceptionDemo
```

```
Enter First Number :
```

```
4
```

```
Enter second Number :
```

```
g
```

```
Number format exception occurred
```

```
Out of try-catch block..
```