



**SHRI VILEPARLE KELAVANI MANDAL'S
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**
(Autonomous College Affiliated to the University of Mumbai)
NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)



Object Oriented Programming using Java Laboratory (DJS22FEL22)

NAME: Ayush Vinod Upadhyay
ROLL NO: I025
SAP ID: 60003220131
BRANCH: Information Technology
BATCH: 1

EXPERIMENT NO – 10

Aim: To implement exceptions in Java (read input using DataInputStream/ BufferedReader classes)

Problem Statement 1: WAP to implement exception handling -default exceptions - NumberFormatException -ArithmeticException -ArrayIndexOutOfBoundsException

CODE:

```
import java.util.*;
class Handle
{
    public static void main(String[] args)
    {
        int a,num;
        Scanner obj=new Scanner(System.in);
        try
        {
            System.out.println("Enter num");
            num=Integer.parseInt(obj.next());
            a=100/num;
            System.out.println(a);
        }
        catch(Exception e)
        {
            System.out.println("Invalid Input\nPls Enter valid character");
        }
        System.out.println("End of program");
    }
}
```

```
C:\Users\ayush\Desktop\JAVA_assignment>javac Handle.java
```

```
C:\Users\ayush\Desktop\JAVA_assignment>java Handle
```

```
Enter num
```

```
10
```

```
10
```

```
End of program
```



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```
import java.util.*;
class Exception1
{
    public static void main(String[] args)
    {
        int a,num;
        Scanner obj=new Scanner(System.in);
        try
        {
            System.out.println("Enter num");
            num=Integer.parseInt(obj.next());
            a=100/num;
            System.out.println(a);
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
        System.out.println("End of program");
    }
}
```

```
C:\Users\ayush\Desktop\JAVA_assignment>javac Exception1.java

C:\Users\ayush\Desktop\JAVA_assignment>java Exception1
Enter num
0
java.lang.ArithmeticException: / by zero
End of program
```



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```
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class Exception1
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    public static void main(String[] args)
    {
        int a,num;
        Scanner obj=new Scanner(System.in);
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        {
            System.out.println("Enter num");
            num=Integer.parseInt(obj.next());
            a=100/num;
            System.out.println(a);
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
        System.out.println("End of program");
    }
}
```

```
C:\Users\ayush\Desktop\JAVA_assignment>javac Exception1.java

C:\Users\ayush\Desktop\JAVA_assignment>java Exception1
Enter num
abc
java.lang.NumberFormatException: For input string: "abc"
End of program
```



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Object Oriented Programming using Java Laboratory (DJS22FEL22)

```
import java.util.*;
class ExceptionArray
{
    public static void main(String[] args)
    {
        Scanner obj=new Scanner(System.in);
        int arr[]=new int[5];
        System.out.println("Enter element");
        for(int i=0;i<arr.length;i++)
        {
            arr[i]=obj.nextInt();
        }
        try
        {
            System.out.println(arr[7]);
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
        System.out.println("End of program");
    }
}
```

```
C:\Users\91720\OneDrive\Desktop\Anish Java>java ExceptionArray
Enter element
1
2
3
4
5
java.lang.ArrayIndexOutOfBoundsException: Index 7 out of bounds for length 5
End of program
```



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Object Oriented Programming using Java Laboratory (DJS22FEL22)

Problem Statement 2:

Write a Java Program to Create a User Defined Exception class MarksOutOfBoundsException, If Entered marks of any subject is greater than 100 or less than 0, and then program should create a user defined Exception of type MarksOutOfBoundsException and must have a provision to handle it

CODE:

```
import java.util.*;
class MarksOutOfBoundsException extends Exception
{
    public MarksOutOfBoundsException(String s)
    {
        System.out.println(s);
    }
}
class CreateException
{
    public static void check(int a) throws MarksOutOfBoundsException //or Exception
    {
        if(a<0 || a>100)
            throw new MarksOutOfBoundsException("Invalid Marks");
        else
            System.out.println("Your marks is valid "+a);
    }
    public static void main(String[] args)
    {
        Scanner obj=new Scanner(System.in);
        System.out.println("Enter marks");
        int marks=obj.nextInt();
        try{
            check(marks);
        }
        catch(MarksOutOfBoundsException e){
            System.out.println(e);
        }
    }
}
```

```
C:\Users\ayush\Desktop\JAVA_assignment>javac CreateException.java
```

```
C:\Users\ayush\Desktop\JAVA_assignment>java CreateException
```

```
Enter marks
```

```
-99
```

```
Invalid Marks
```

```
MarksOutOfBoundsException
```