



Faculty of Technology and Engineering  
Chandubhai S Patel Institute of Technology  
Department of Computer Science & Engineering

Date: 02 / 09 / 2022

Academic Year	:	2022-23	Semester	:	3
Course code	:	CE251	Course name	:	Java Programming

Part - 4

Practical - 1

Aim	Write a program to show the try - catch block to catch the different types of exception.
-----	--

Code

```
/*
    Name : Aswani Darsh.
    ID   : 21CE006.
    Pr   : WAP to show the try - catch block to catch the different
types of exception.
*/
class _006_4_1 {
    public static void main(String[] args) {

        // ArrayIndexOutOfBoundsException
        try {
            int a = 10;
            System.out.println(a / 0);
        } catch (Exception e) {
            System.out.println(e);
        }

        // ArrayIndexOutOfBoundsException
        try {
            int[] array = new int[3];
            System.out.println(array[3]);
        } catch (Exception e) {
            System.out.println(e);
        }

        // ClassCastException
        try {
            Object obj = new Object();
            String sobj = (String) obj;
        } catch (Exception e) {
            System.out.println(e);
        }

        // NullPointerException
        try {
            Integer b = null;
            if (b == 10) {
                System.out.println("Same");
            } else {
                System.out.println("Not same");
            }
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```

```
    }

    // NumberFormatException
    try {
        String s = "9.45";
        Integer i = Integer.parseInt(s);
        System.out.println(i);
    } catch (Exception e) {
        System.out.println(e);
    }

    // IllegalArgumentException
    try {
        Thread.sleep(-100);
    } catch (Exception e) {
        System.out.println(e);
    }

    // NegativeArraySizeException
    try {
        int[] array2 = new int[-3];
    } catch (Exception e) {
        System.out.println(e);
    }
}
```

## Practical-2

Aim	Write a program to generate user defined exception using “throw” and “throws” keyword.
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Code

```
// package Practicle_file;
/*
    Name : Aswani Darsh.
    ID   : 21CE006.
    Pr   : Write a program to generate user defined exception using
    "throw" and "throws" keyword.
*/
import java.util.*;
class Myexception extends Exception{
    public Myexception(String s)
    {
        super(s);
    }
}
public class _006_4_2 {
    public static void main(String[] args) {
        Scanner s =new Scanner(System.in);
        int b = 300;
        System.out.println("Enter amount to be deposited  :");
        int d = s.nextInt();
        b+=d;
        boolean f =true;
        while(f)
        {
            System.out.println("Enter Amount to be withdrawn");
            int w = s.nextInt();
            if(b>w){
                b-=w;
                System.out.println("Your Money has been successfully
withdrawn!....");
                System.out.println("Balance of your account : "+b);
            }
            else{
                f=false;
                try{
                    throw new Myexception("Not Sufficient funds");
                }
                catch(Myexception e)
                {
                    System.out.println(e.getMessage());
                }
            }
        }
    }
}
```

	<pre>}</pre>
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### Practical - 3

Aim	Write a program that raises two exceptions. Specify two 'catch' clauses for the two exceptions. Each 'catch' block handles a different type of exception. For example the exception could be 'ArithmeticException' and 'ArrayIndexOutOfBoundsException'. Display a message in the 'finally' block.
-----	--

Code

```
/*
    Name : Aswani Darsh.
    ID   : 21CE006.
    Pr   : Write a program that raises two exceptions. Specify two
    'catch' clauses for the
           two exceptions. Each 'catch' block handles a different type of
    exception. For
           example the exception could be 'ArithmeticException' and
           'ArrayIndexOutOfBoundsException'. Display a message in the
    'finally' block.
*/
public class _006_4_3 {
    public static void main(String[] args) {
        int a[] = new int[5];
        String ptr = null;
        try
        {
            if (ptr.equals("Darsh"))
                System.out.print("Same");
            else
                System.out.print("Not Same");
        }
        catch(Exception e)
        {
            System.out.println("NullPointerException Caught");
        }
        try {
            System.out.println(a[10]);
        }
        catch (ArrayIndexOutOfBoundsException e) {
            System.out.println("ArrayIndexOutOfBoundsException
occurs");
        }
        try{
            a[4]=30/0;
        }
        catch (ArithmeticException e) {
            System.out.println("Arithmetic Exception occurs");
        }

        finally{
            System.out.println("rest of the code");
        }
    }
}
```

