MANAV RACHNA UNIVERSITY, FARIDABAD

Department of Computer Science & Technology

Course: B.Tech. CSE **Semester: III**

Subject: Object Oriented Programming using Java (CSH201B-T)

Tutorial: 10 Exception Handling

Objective: *Student will be able to understand Concepts Exception Handling*

Course Outcomes:

CSH201B.1: To impart **understanding** of basic programming concepts in Java language.

CSH201B.2: To enable the student to articulate given program scenario and **apply** different programming constructs.

CSH201B.3: To **analyze** the semantics of the given problem statement and illustrate the programming techniques to solve them.

Blooms Taxonomy Level: *BT1, BT2, BT3*

1. *Predict the output*

```
class GFG {
    public static void main (String[] args) {

        // array of size 4.
        int[] arr = new int[4];

        // this statement causes an exception
        int i = arr[4];

        // the following statement will never execute
        System.out.println("Hi, I want to execute");
    }
}
```

2. What is the difference between final and finally? Justify the usage of both using example.
3. Explain the exception handling mechanism with diagram.
4. Write a program in Java that will handle the **ArrayIndexOutOfBoundException**.
5. What is custom defined Exception?
6. Write a Java Program that will handle the **InsufficientBalanceException** if the amount to be withdrawn will make the account balance less than 2000.
7. Draw diagram that represents Exception Hierarchy.
8. Predict the output:

```
class exception_handling
    {
        public static void main(String args[])
        {
            try
            {
                int a[] = {1, 2,3 , 4, 5};
                for (int i = 0; i < 7; ++i)
                    System.out.print(a[i]);
            }
            catch(ArrayIndexOutOfBoundsException e)
            {
        System.out.print("0");
            }
        }
    }
```

9. Predict the output:

```
class MyException extends Exception
{
    public MyException(String s)
    {
        // Call constructor of parent Exception
        super(s);
    }
}

// A Class that uses above MyException
public class Main
{
    // Driver Program
    public static void main(String args[])
    {
        try
        {
            // Throw an object of user defined exception
            throw new MyException("GeeksGeeks");
        }
        catch (MyException ex)
        {
            System.out.println("Caught");

            // Print the message from MyException object
            System.out.println(ex.getMessage());
        }
    }
}
```