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Roll no-12
div-B
Experiment no-11
Experiment name-Implements programs based on try catch and finally block.

Try   We specify the block of code that might give rise to the exception in a special block with a "Try" keyword.

Catch   When the exception is raised it needs to be caught by the program. This is done using a "catch" keyword. So a catch block follows the try block that raises an exception. The keyword catch should always be used with a try.

Finally Sometimes we have an important code in our program that needs to be executed irrespective of whether or not the exception is thrown. This code is placed in a special block starting with the "Finally" keyword. The Finally block follows the Try-catch block.
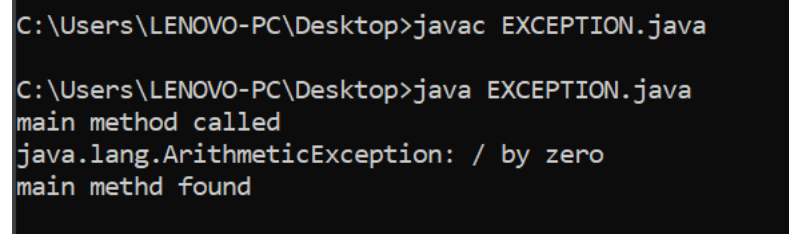
1.Program using try and catch block.
Input-

```
class EXCEPTION
{
  public static void main(String args[])
  {
  System.out.println("main method called");
  int a=10,b=0,c;
  try
  {
  c=a/b;
  System.out.println(+c);
  }
  catch(Exception e)
  {
    System.out.println(e);
  }
  System.out.println("main methd found");
  }
}
```

Output-

```
C:\Users\LENOVO-PC\Desktop>javac EXCEPTION.java

C:\Users\LENOVO-PC\Desktop>java EXCEPTION.java
main method called
java.lang.ArithmeticException: / by zero
main methd found
```

2.java program using finally keyword.

```
class EXCEPTION
{
```

```java
    public static void main(String args[])
    {
        try
        {
            String s=null;
            System.out.println(s.toUpperCase());
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
        finally
        {
            try
            {
                System.out.println(10/0);
            }
            catch(Exception e)
            {
                System.out.println(e);
            }
            finally
            {
                System.out.println("hey");
            }
        }
    }
}
```
Output-

```
C:\Users\LENOVO-PC\Desktop>javac EXCEPTION1.java

C:\Users\LENOVO-PC\Desktop>java EXCEPTION1
java.lang.NullPointerException: Cannot invoke "String.toUpperCase()" because "<local1>" is null
java.lang.ArithmeticException: / by zero
hey
```

3.java program using nested try.
Input-
```java
class EXCEPTION
{
    public static void main(String args[])
    {
        try
        {
            try
            {
                int arr[]={2,4,67};
                System.out.println(+arr[5]);
            }
            catch(ArrayIndexOutOfBoundsException e)
            {
                System.out.println(e);
```

```
        }
        System.out.println(10/0);
    }
    catch(Exception e)
    {
        System.out.println(e);
    }
  }
}
```

Output-


```
C:\Users\LENOVO-PC\Desktop>javac   EXCEPTION2.java

C:\Users\LENOVO-PC\Desktop>java   EXCEPTION2
java.lang.ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 3
java.lang.ArithmeticException: / by zero
```