1. Familiarize with the File Operations in Java. Develop a program to read the content of one file and copy the content to other file.

```
package _221047003;
import java.io.File;
import java.io.IOException;
class Fileop {
        public static void main(String[] args) {
          try {
            File myObj = new File("C:\\Users\\MSIS\\Desktop\\Kruthi\\Source.txt");
            if (myObj.createNewFile()) {
              System.out.println("File created: " + myObj.getName());
            } else {
              System.out.println("File already exists.");
            }
          } catch (IOException e) {
            System.out.println("An error occurred.");
            e.printStackTrace();
          }
        }
      }
package _221047003;
import java.io.File;
import java.io.FileWriter;
import java.io.IOException;
public class Writing_into_file {

                    public static void main(String[] args) {
                      try {
                        FileWriter myWriter = new
FileWriter("C:\\\\Users\\\\MSIS\\\\Desktop\\\\Kruthi\\\\Source.txt");
                        myWriter.write("Files in Java might be tricky."+"\n"+"but it is fun enough!");
                        myWriter.close();
                        System.out.println("Successfully wrote to the file.");
                      } catch (IOException e) {
                        System.out.println("An error occurred.");
                        e.printStackTrace();
                      }
                    }
                  }
package _221047003;

import java.io.File;
import java.io.FileNotFoundException;
import java.util.Scanner;

public class Reading_the_file {

        public static void main(String[] args) {
          try {
            File myObj = new File("C:\\Users\\MSIS\\Desktop\\Kruthi\\Source.txt");
            Scanner myReader = new Scanner(myObj);
            while (myReader.hasNextLine()) {
              String data = myReader.nextLine();
              System.out.println(data);
            }
            myReader.close();
```

```
                } catch (FileNotFoundException e) {
                  System.out.println("An error occurred.");
                  e.printStackTrace();
                }
              }
            }
package _221047003;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.util.Scanner;


public class Copy_file {

    // Main driver method
    public static void main(String[] args)
        throws IOException
    {

        // Creating two stream
        // one input and other output
        FileInputStream fis = null;
        FileOutputStream fos = null;

        // Try block to check for exceptions
        try {

            // Initializing both the streams with
            // respective file directory on local machine

            // Custom directory path on local machine
            fis = new FileInputStream(
                "C:\\Users\\MSIS\\Desktop\\Kruthi\\Source.txt");

            // Custom directory path on local machine
            fos = new FileOutputStream(
                "C:\\Users\\MSIS\\Desktop\\Kruthi\\destination.txt");

            int c;

            // Condition check
            // Reading the input file till there is input
            // present
            while ((c = fis.read()) != -1) {

                // Writing to output file of the specified
                // directory
                fos.write(c);
            }

            // By now writing to the file has ended, so

            // Display message on the console
            System.out.println(
```

```
            "copied the file successfully");
        }

        // Optional finally keyword but is good practice to
        // empty the occupied space is recommended whenever
        // closing files,connections,streams
        finally {

            // Closing the streams

            if (fis != null) {

                // Closing the fileInputStream
                fis.close();
            }
            if (fos != null) {

                // Closing the fileOutputStream
                fos.close();
            }
        }
    }
}
```

2. Write a Calculator Utility that does the that performs the set of operations defined in an interface called MyOperations. Develop the Application Program to utilize the operations defined in MyOperations. Your Application should have proper Exception Handling and your operation should utilize at least two Custom Exceptions. Record of your operations should be recorded in a file

```
package _221047003;

public interface Myoperations {
            public int add(int a, int b);
            /** Returns a-b */
            public int subtract(int a, int b);
            /** Returns a*b */
            public int multiply(int a, int b);
            /** Returns a/b */
            public int divide(int a, int b);
}



package _221047003;

public class Calculator implements Myoperations {
public int add(int a, int b) {
    System.out.println("ICalculator - add " + a + " and " + b+"\n"+ (a+b));
    return a+b;
    }

public int subtract(int a, int b) {
    System.out.println("ICalculator - subtract " + a +" and "+ b +"\n"+ (a-b));
    return a-b;
}

public int multiply(int a, int b) {
    System.out.println("ICalculator - multiply " + a + " and " + b+"\n"+ (a*b));
    return a*b;
```

```
}
   public int divide(int a, int b)
   {
   System.out.println("ICalculator - Divide " + a + " and " + b+"\n"+ (a/b));
   return a/b;
}
}

package _221047003;
import java.io.BufferedWriter;
import java.io.File;
import java.io.FileOutputStream;
import java.io.FileWriter;
import java.io.IOException;
import java.io.PrintWriter;
import java.io.Writer;

public class Test {
public static void main(String args[]) {
try
{
                        FileWriter fw = new FileWriter("C:\\Users\\vivek\\OneDrive\\Desktop\\Kruthi\\output.txt",
true);
                                        BufferedWriter pw = new BufferedWriter(fw);
            Calculator c=new Calculator();
            c.add(6,6);
            pw.write("\n"+"Operation 1: Adding two numbers 6,6 and the result is 12");
            c.subtract(6,6);
            pw.write("\n"+"Operation 2: Subtracting two numbers 6,6 and the result is 0");
            c.multiply(6,6);
            pw.write("\n"+"Operation 3: Multiplying two numbers 6,6 and the result is 36");
            c.divide(6,6);
            pw.write("\n"+"Operation 4: Dividing two numbers 6,6 and the result is 1");
   pw.flush();
   fw.close();
   pw.close();
   System.out.println("Output Written to file");
}
            catch(IOException e)
   {
     e.printStackTrace();
   }
}
}
```