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Lab10

01.

```java
import java.util.Scanner;

public class ExceptionHandling {

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("Enter the numerator: ");
        int numerator = scanner.nextInt();

        System.out.println("Enter the denominator: ");
        int denominator = scanner.nextInt();

        try {
            int result = numerator / denominator;
            System.out.println("The result of the division is: " + result);
        } catch (ArithmeticException e) {
            System.out.println("Division by zero error.");
        }
    }
```

```
}
```

02.

```java
import java.util.Scanner;

public class ExceptionHandling {

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("Enter the size of the array: ");
        int size = scanner.nextInt();

        int[] array = new int[size];

        System.out.println("Enter the index of the element you want to access: ");
        int index = scanner.nextInt();

        try {
            System.out.println("The element at index " + index + " is: " + array[index]);
        } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println("The index you entered is out of bounds.");
        }
    }
}
```

03.

```java
import java.io.File;

import java.io.FileNotFoundException;

import java.io.IOException;

public class ExceptionHandling {

    public static void main(String[] args) {

        File file = new File("file_that_does_not_exist.txt");

        try {

            System.out.println("The contents of the file are: ");

            System.out.println(file.readAllBytes());

        } catch (FileNotFoundException e) {

            System.out.println("The file does not exist.");

        } catch (IOException e) {

            System.out.println("An error occurred while reading the file.");

        }

    }

}
```