Question 01

```
Import
java.util.Scanner;


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


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


       System.out.print("Enter the denominator: ");
int denominator = scanner.nextInt();
        try
{
          int result = divide(numerator, denominator);
          System.out.println("Result of division: " + result);
       } catch (ArithmeticException ex)
       {
          System.out.println("Error: Cannot divide by zero!");
       }
   }


   public static int divide(int numerator, int denominator)
{        if (denominator == 0)
{           throw new ArithmeticException("Divide by zero
error!");
```

```
        }
        return numerator / denominator;
    }
}
```

Question 02

```
import java.util.Scanner;

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

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

        int[] numbers = new int[size];
        for (int i = 0; i < size; i++)
{           numbers[i] = i * 10;
        }

        System.out.print("Enter the index to access: ");
int index = scanner.nextInt();

        try
{
            int value = accessArrayElement(numbers, index);
            System.out.println("Value at index " + index + ": " + value);
        } catch (ArrayIndexOutOfBoundsException ex)
```

```
{
            System.out.println("Error: Invalid index. Please enter a valid index within 0 and " + (size - 1) + ".");
        }
    }

    public static int accessArrayElement(int[] array, int index) {
        return array[index];
    }
}
```

Question 03

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

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

        System.out.print("Enter the file path: ");
        String filePath = scanner.nextLine();
         try
{
            readFile(filePath);
        } catch (FileNotFoundException ex)
{
            System.out.println("Error: File not found. Please check the file path and try again.");
```

```
        }
    }

    public static void readFile(String filePath) throws FileNotFoundException
{
        File file = new File(filePath);
        Scanner fileScanner = new Scanner(file);

        // Read and process the content of the file (you can add your own logic here)
while (fileScanner.hasNextLine())
{
            String line = fileScanner.nextLine();
            System.out.println(line);
        }

        fileScanner.close();
    }
}
```