LAB SHEET 10 – ANSWERS

Question 01:

```java
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) {
```

```java
            System.out.println("Error: Division by zero is not allowed.");

        }


        scanner.close();

    }


    public static int divide(int numerator, int denominator)

{

        if (denominator == 0)

{

            throw new ArithmeticException("Division by zero is not allowed.");

        }


        return numerator / denominator;

    }

}
```

Question 02:

```java
import java.util.Scanner;


public class ArrayOutOfBoundsHandling

{
```

```java
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[] arr = new int[size];

    System.out.println("Enter " + size + " integers:");
    for (int i = 0; i < size; i++)
    {

        arr[i] = scanner.nextInt();
    }

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


    try
    {

        int value = arr[index];
        System.out.println("Value at index " + index + ": " + value);
    }
```

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


        scanner.close();
    }
}
```

Question 03:

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


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

        System.out.print("Enter the file path: ");
        String filePath = scanner.nextLine();
```

```java
    try
{
        File file = new File(filePath);
        Scanner fileScanner = new Scanner(file);

        while (fileScanner.hasNextLine())
{
            String line = fileScanner.nextLine();
            System.out.println(line);
        }

        fileScanner.close();
    }
catch (FileNotFoundException ex)
 {
        System.out.println("Error: The specified file was not found.");
    }

    scanner.close();
  }
}
```