

```
1. package javatask;

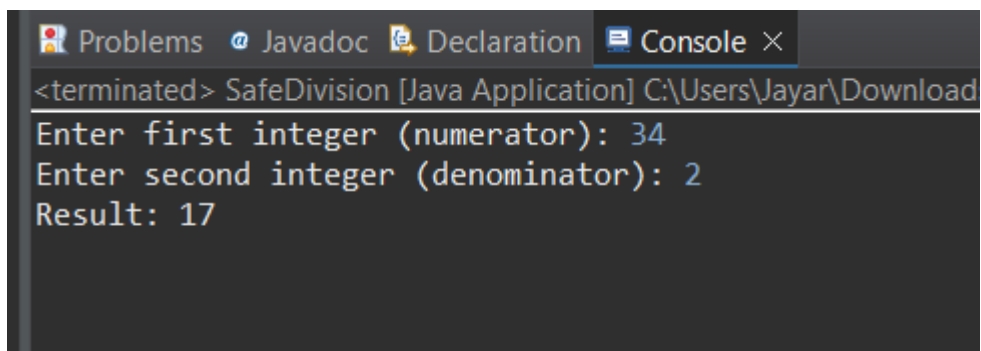
import java.util.Scanner;

public class SafeDivision {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter first integer (numerator): ");
        int a = sc.nextInt();
        System.out.print("Enter second integer (denominator): ");
        int b = sc.nextInt();

        try {
            int result = a / b;
            System.out.println("Result: " + result);
        } catch (ArithmeticException e) {
            System.out.println("Error: Cannot divide by zero.");
        } finally {
            sc.close();
        }
    }
}
```

## RESULT:



The screenshot shows an IDE's console window with the following content:

```
<terminated> SafeDivision [Java Application] C:\Users\Jayar\Download
Enter first integer (numerator): 34
Enter second integer (denominator): 2
Result: 17
```

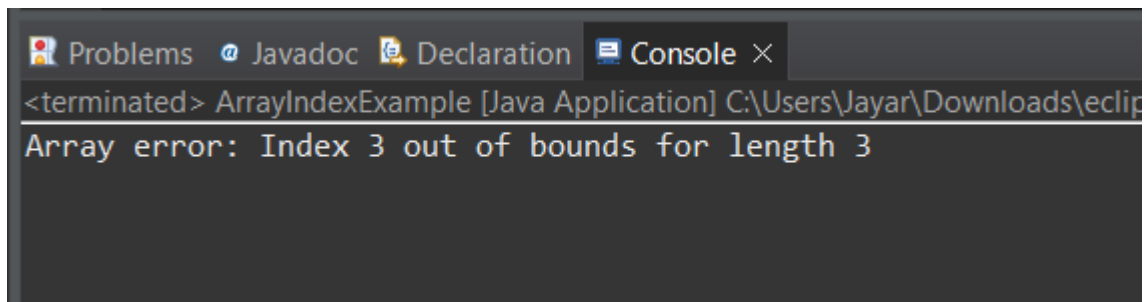
## 2. ArrayIndexOutOfBoundsException

```
package javatask;

public class ArrayIndexExample {

    public static void main(String[] args) {
        int[] nums = {10, 20, 30};
        try {
            System.out.println(nums[3]);
        } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println("Array error: " + e.getMessage());
        }
    }
}
```

### RESULT:



## StringIndexOutOfBoundsException

```
package javatask;

public class StringIndexExample {

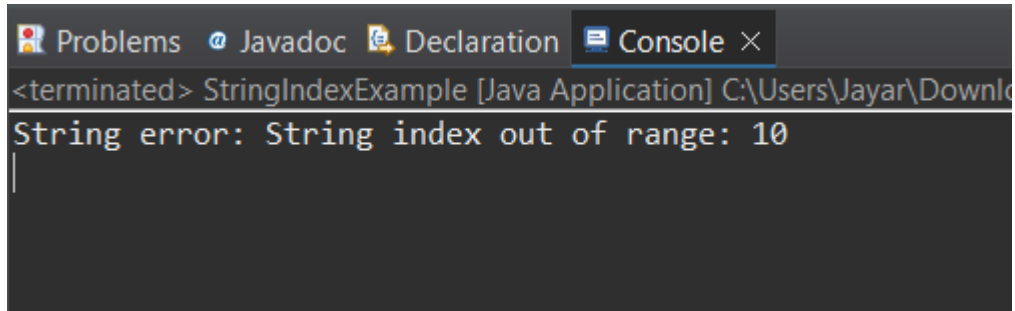
    public static void main(String[] args) {
        String word = "JAVA";
        try {
            char ch = word.charAt(10);
            System.out.println(ch);
        }
        catch (StringIndexOutOfBoundsException e)
```

```

{
    System.out.println("String error: " + e.getMessage());
}
}
}

```

## RESULT:



## 3.

```

package javatask;

public class InvalidAgeException extends Exception {
    public InvalidAgeException(String message) {
        super(message);
    }
}

package javatask;
import java.util.Scanner;

public class AgeChecker {
    static void checkAge(int age) throws InvalidAgeException {
        if (age < 18) {
            throw new InvalidAgeException("Age " + age + " is not allowed (must be 18
or above).");
        }
    }

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

```

```

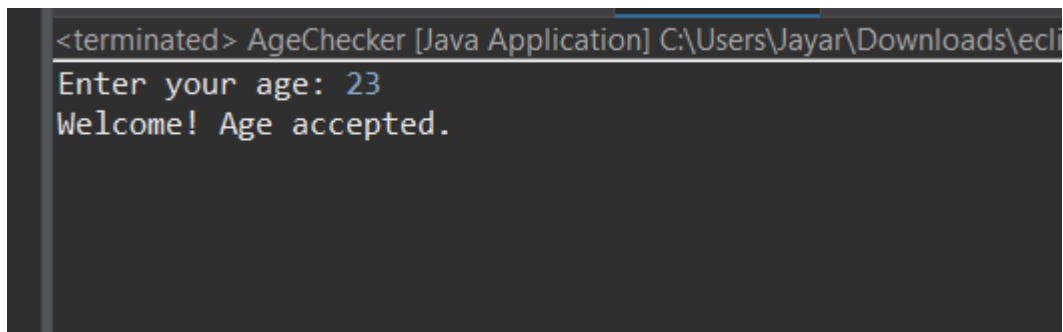
        System.out.print("Enter your age: ");

        int age = sc.nextInt();

        try {
            checkAge(age);
            System.out.println("Welcome! Age accepted.");
        } catch (InvalidAgeException e) {
            System.out.println("Error: " + e.getMessage());
        } finally {
            sc.close();
        }
    }
}

```

## RESULT:



```

<terminated> AgeChecker [Java Application] C:\Users\Jayar\Downloads\eci
Enter your age: 23
Welcome! Age accepted.

```

## 4. package javatask;

```
import java.io.File;
```

```
import java.io.FileNotFoundException;
```

```
import java.util.Scanner;
```

```
public class FileReaderExample {
```

```
    public static void main(String[] args) {
```

```
        File file = new File("data.txt");
```

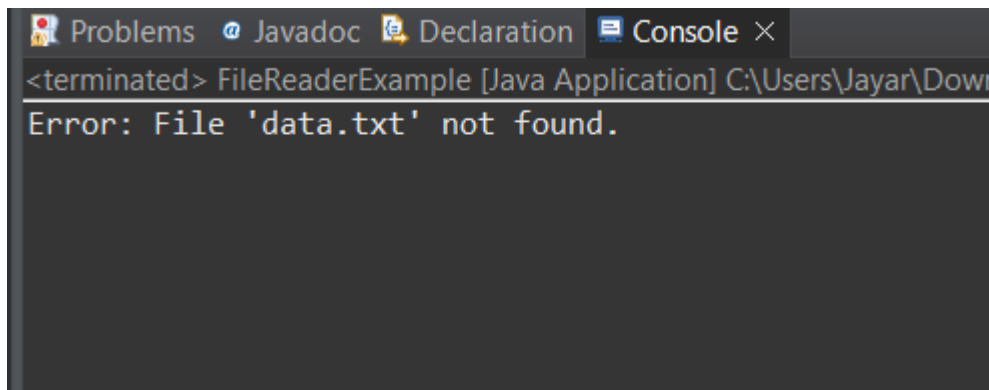
```
        try (Scanner sc = new Scanner(file)) { // try-with-resources auto-closes Scanner
```

```

        System.out.println("File contents:");
        while (sc.hasNextLine()) {
            System.out.println(sc.nextLine());
        }
    } catch (FileNotFoundException e) {
        System.out.println("Error: File 'data.txt' not found.");
    }
}
}

```

## RESULT:



```

5. package javatask;

import java.util.ArrayList;

public class ArrayListClearExample {
    public static void main(String[] args) {
        ArrayList<String> fruits = new ArrayList<>();
        fruits.add("Apple");
        fruits.add("Banana");
        fruits.add("Mango");

        System.out.println("Before clear: " + fruits);
        fruits.clear();
        System.out.println("After clear: " + fruits);
    }
}

```

## RESULT:

```
<terminated> ArrayListClearExample [Java Application] C:\Users\Jayar\
Before clear: [Apple, Banana, Mango]
After clear: []
|
```

```
6. package javatask;

import java.util.Map;
import java.util.TreeMap;

public class EmployeeNamesSorted {
    public static void main(String[] args) {
        TreeMap<String, Integer> employees = new TreeMap<>();
        employees.put("Ravi", 102);
        employees.put("Anita", 101);
        employees.put("Vivek", 105);
        employees.put("Kiran", 103);
        System.out.println("Employee names in alphabetical order:");
        for (String name : employees.keySet()) {
            System.out.println(name);
        }
    }
}
```

## RESULT:

```
Problems Javadoc Declaration Console ×
<terminated> EmployeeNamesSorted [Java Application] C:\Users\Jayar\Down
Employee names in alphabetical order:
Anita
Kiran
Ravi
Vivek
```

```
7. import java.util.*;

public class ListToArrayExample {

    public static void main(String[] args) {

        List<String> colors = new ArrayList<>();

        colors.add("Red");

        colors.add("Green");

        colors.add("Blue");

        String[] colorArray = colors.toArray(new String[0]);

        System.out.println("Array elements:");

        for (String c : colorArray) {

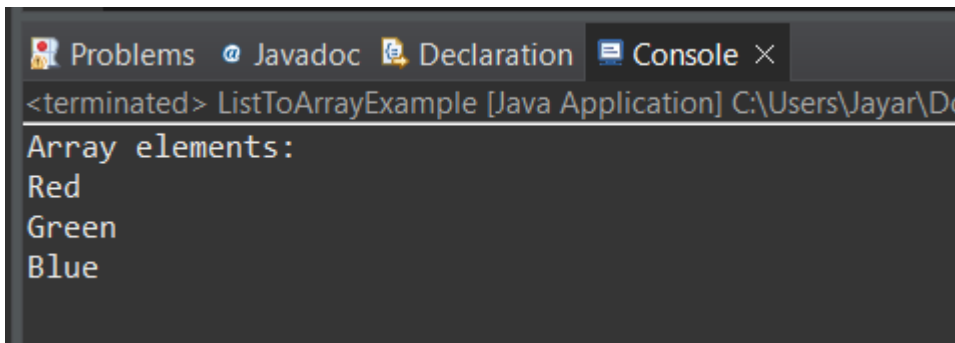
            System.out.println(c);

        }

    }

}
```

**RESULT:**

A screenshot of an IDE's console window. The window has a dark background and a light-colored title bar. The title bar contains four tabs: 'Problems', 'Javadoc', 'Declaration', and 'Console'. The 'Console' tab is active. The console output shows the text '<terminated> ListToArrayExample [Java Application] C:\Users\Jayar\De' on the first line, followed by 'Array elements:' on the second line, and then 'Red', 'Green', and 'Blue' on the next three lines, each on a new line. The text is in a monospaced font.