TRINITY INTERNATIONAL COLLEGE

(Tribhuvan University Affiliated)

Lab Report:1.3 Advanced Java Programming

Submitted by:

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Submitted to:

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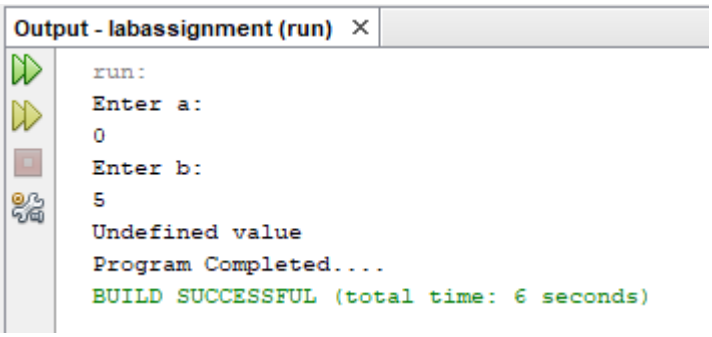
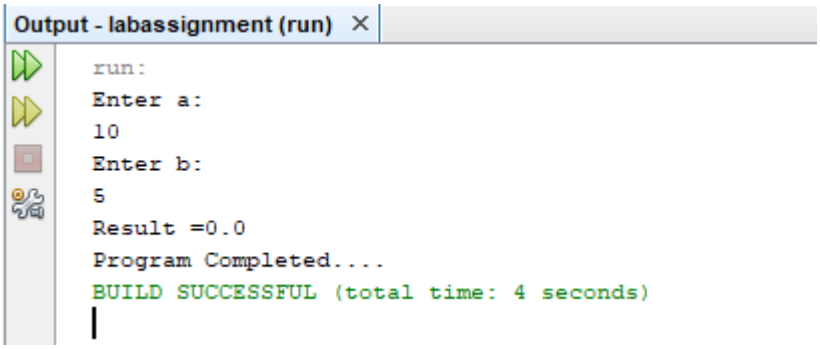
1. Write a program to demonstrate try-catch-finally.

Program:

```
package labassignment;

import java.util.Scanner;

public class Try_Catch {

    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        System.out.println("Enter a:");
        int a = in.nextInt();
        System.out.println("Enter b:");
        int b = in.nextInt();
        try {
            float result = b/a;
            System.out.println("Result ="+result);
        }
        catch(Exception e){
            System.out.println("Undefined value");
        }
        finally{
            System.out.println("Program Completed....");
        }
    }
}
```

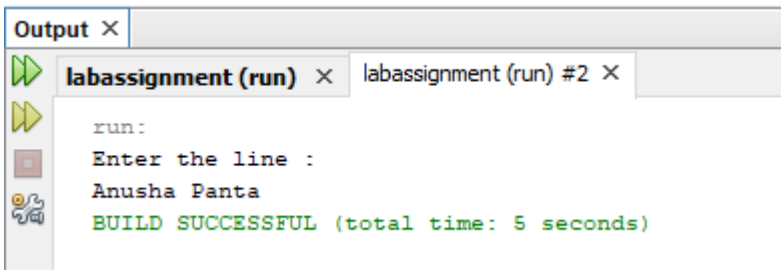


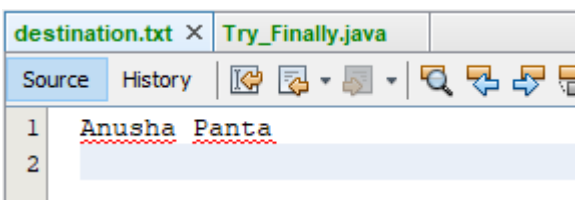


2. Write a program to demonstrate try-finally.

Program:

```
package labassignment;

import java.io.FileWriter;
import java.io.IOException;
import java.io.PrintWriter;
import java.util.Scanner;

public class Try_Finally {

    private static String name;

    public static void main(String[] args) throws IOException {
        PrintWriter out = null;
        try {
            out = new PrintWriter(new FileWriter("destination.txt"));
            Scanner in = new Scanner(System.in);

            System.out.println("Enter the line :");
            String name = in.nextLine();

            out.println(name);

        } finally {
            if (out != null) {
                out.close();
            }

        }
    }
}
```



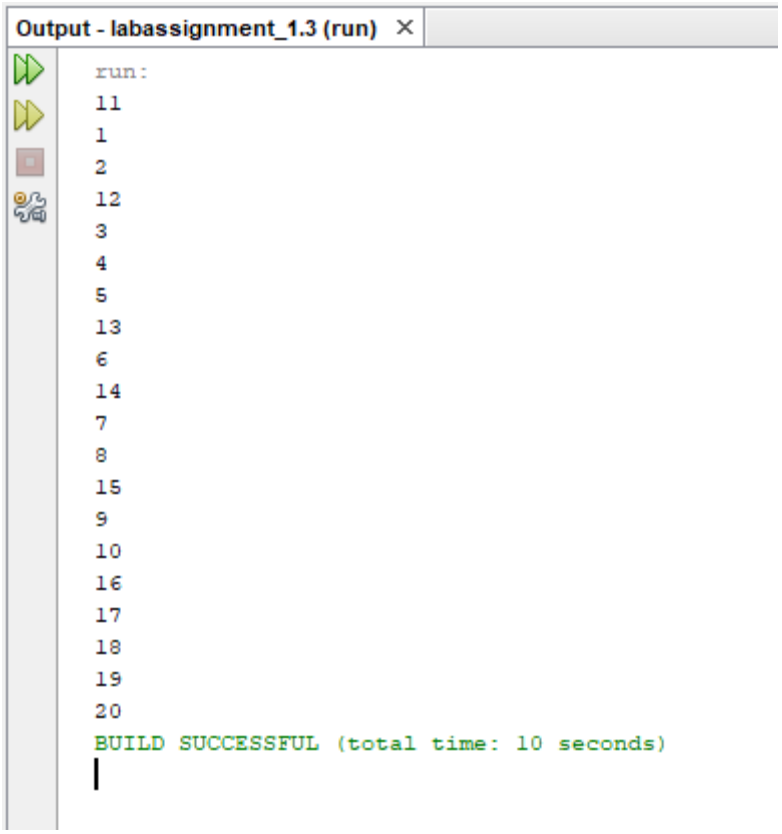


3. Write a program to create two threads. The first thread should print numbers from 1 to 10 at intervals of 0.5 second and the second thread should print numbers from 11 to 20 at the interval of 1 second.

Program:

```
package labassignment_1_3;

class NumberOne extends Thread {

    @Override
    public void run() {
        for (int i = 1; i <= 10; i++) {
            System.out.println(i);
            try {
                Thread.sleep(500);
            } catch (InterruptedException e) {
            }
        }
    }
}

class NumberEleven extends Thread {

    @Override
    public void run() {
        for (int i = 11; i <= 20; i++) {
            System.out.println(i);
            try {
                Thread.sleep(1000);
            } catch (InterruptedException e) {
            }
        }
    }
}

public class Thread_Odd_Even {

    public static void main(String[] args) throws InterruptedException {
        Thread t1 = new NumberOne();
        Thread t2 = new NumberEleven();

        t1.start();
        t2.start();
```

```
    }
}
```

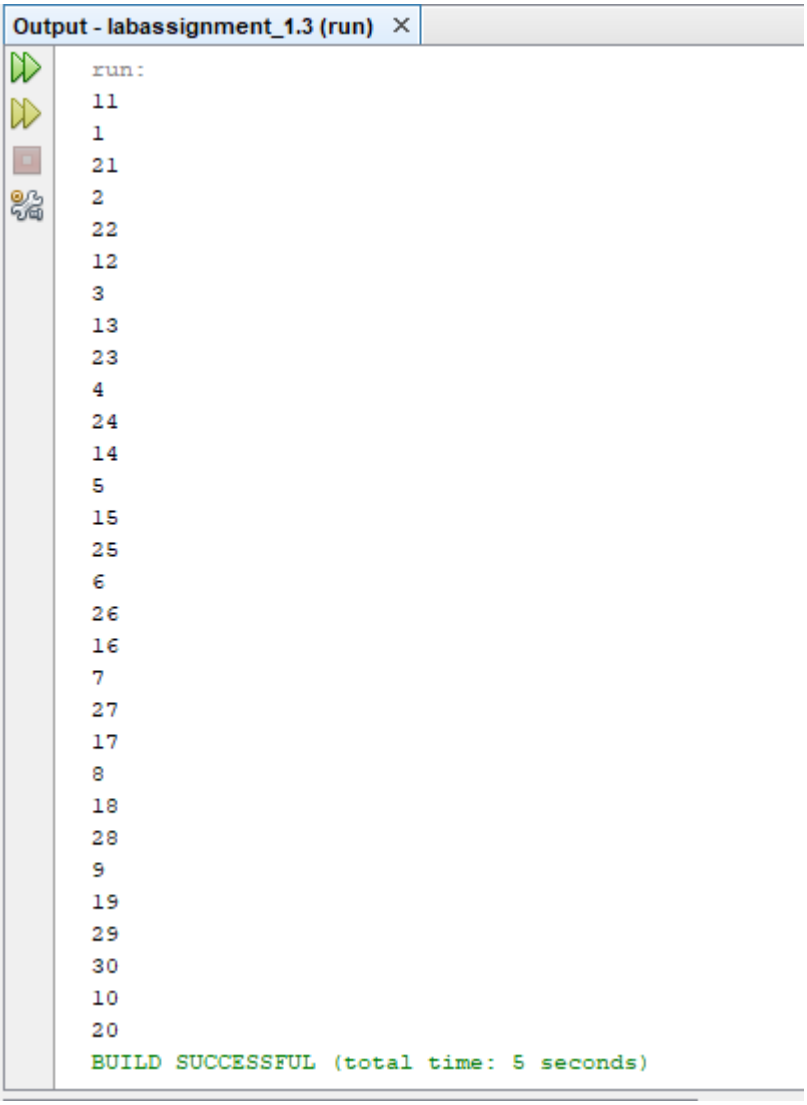


4. Write a program to execute multiple threads in priority base.

Program:

```
package labassignment_1_3;

class One_To_Ten extends Thread {

    @Override
    public void run() {
        for (int i = 1; i <= 10; i++) {
            System.out.println(i);
            try {
                Thread.sleep(500);
            } catch (InterruptedException e) {
            }
        }
    }
}

class Eleven_Twenty extends Thread {
```

```
    @Override
    public void run() {
        for (int i = 11; i <= 20; i++) {
            System.out.println(i);
            try {
                Thread.sleep(500);
            } catch (InterruptedException e) {
            }
        }
    }
}

class Twentyone_Thirty extends Thread {

    @Override
    public void run() {
        for (int i = 21; i <= 30; i++) {
            System.out.println(i);
            try {
                Thread.sleep(500);
            } catch (InterruptedException e) {
            }
        }
    }
}

/**
 *
 * @author user
 */
public class Threading_PriorityBase {

    public static void main(String[] args) throws InterruptedException {
        Thread t1 = new One_To_Ten();
        Thread t2 = new Eleven_Twenty();
        Thread t3 = new Twentyone_Thirty();
        t1.setPriority(Thread.MAX_PRIORITY);
        t2.setPriority(Thread.MIN_PRIORITY);
        t3.setPriority(Thread.NORM_PRIORITY);
        t1.start();
        t2.start();
        t3.start();

    }
}
```


Output - labassignment_1.3 (run)
run:
11
1
21
2
22
12
3
13
23
4
24
14
5
15
25
6
26
16
7
27
17
8
18
28
9
19
29
30
10
20
BUILD SUCCESSFUL (total time: 5 seconds)