**Lab on Exception Handling**

1. **Run the following program and observe the output. Study the program. Is there a possibility of having an exception here? If yes, where and why? Modify the program so that it handles the exception and prints an appropriate message.**

import javax.swing.JOptionPnae;

public class DialogBoxInput

{

public static void main (String[] args)

{

String s = JOptionPane.showInputDialog(null, "Enter an integer");

System.out.println("You entered "+ s);

int n = Integer.parseInt(s);

System.out.println("Conversation was really successful."+"the integer is "+ n);

}

}

1. **Study the following program carefully. Then answer the questions**.

import javax.swing.JOptionPane;

public class DialogBoxInput

{

public static void main (String[] args)

{

int divisor = 0;

int quotient = 0;

int dividend = 100;

boolean goodInput = false;

String s = JOptionPane.showInputDialog(null, "Enter an integer");

do{

divisor = Integer.parseInt(s);

quotient = dividend/divisor;

goodInput = true;

} while (!goodInput);

JOptionPane.showMessageDialog(null, "The result is "+quotient);

}

}

**Questions:**

1. What is the input for this program? And what is the output?
2. Is there a possibility of runtime errors? If so, what are those errors? What kind of user input will trigger those runtime errors?
3. What are the exceptions thrown by the program when the runtime errors occur?
4. Modify the program so that it correctly handles those exceptions and prints appropriate message when these exceptions occur.
5. Modify the program to add a “finally” clause. The *finally*  clause is executed no matter how the try block is exited. If no exception is thrown, the finally clause is executed after the try block is complete. If an exception is thrown, the appropriate catch clause is executed, and then the finally clause is executed. See the syntax of finally clause from the book (page 445).

**What to submit:**

* The modified program for question #1
* The modified program for question #2
* The answers to the questions a, b, c.