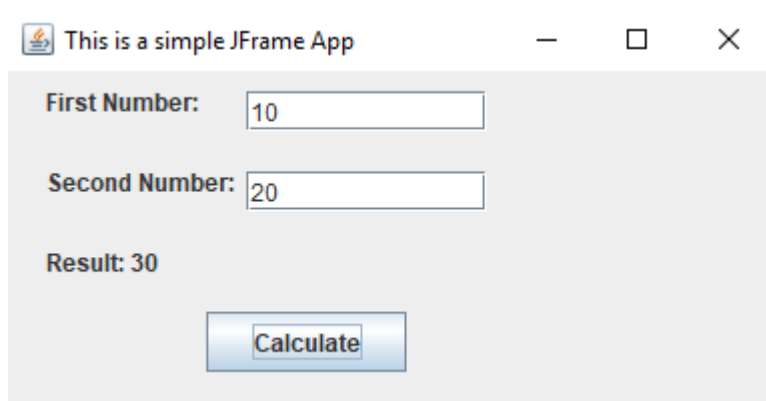


## Lab -3 (Assignment - 3)

- 1) Write a program to demonstrate exception handling using **try, catch and finally** block.
- 2) Write a program to handle following exceptions:
  - a) **Arithmetic**      b) **NullPointerException**      c) **ArrayIndexOutOfBoundsException**
  - d) **StringIndexOutOfBoundsException**      e) **NumberFormatException**
- 3) Write a program to demonstrate **throw and throws** keyword.
- 4) Write a program to demonstrate **nested try** block.
- 5) Write a program to demonstrate **multiple catch** block.
- 6) Write a program to input any string and convert it to **uppercase and lowercase**.
- 7) Write a program to demonstrate character extraction using **charAt()** and **getChars()** methods.
- 8) Write a program to demonstrate string comparison using **equals()** and **compareTo()** methods.
- 9) Write a program to search any string **indexOf()** and **lastIndexOf()** methods.
- 10) Write a program to demonstrate modification of string using **substring()**, **replace()**, **concat()** and **trim()** methods.
- 11) Write a program to demonstrate various methods of **String Buffer** class.
- 12) Write a program to demonstrate thread by **extending Thread** class.
- 13) Write a program to demonstrate thread by **implementing Runnable** interface.
- 14) Write a program to demonstrate **sleep()** and **stop()** methods.
- 15) Write a program to **get and set priorities** in thread.
- 16) Write a program to demonstrate **Inter Thread Communication** using Synchronization.
- 17) Write a program to demonstrate **deadlock condition**.
- 18) Write a program to **push and pop items** in and from stack.
- 19) Write a program to demonstrate **vector**.
- 20) Write a program to demonstrate **hash table**.
- 21) Write a program to generate **random number** in Java.
- 22) Write a program to implement **Map, List and Set** Interface.
- 23) Write a program to demonstrate **Array List, Linked List, Hash Set and Tree Set**.
- 24) Write a program to demonstrate **Iterator and Comparator** in Collection Framework.
- 25) Write a **swing program** for the following:
  - a)



b)

The image shows a Java Swing window titled "This App contains almost all Elements of Swing". The window contains the following elements:

- Name:** A text input field.
- Address:** A text input field.
- Class:** A dropdown menu showing "Select Class".
- Gender:** Two radio buttons labeled "Male" and "Female".
- Shift:** A list box showing "Morning", "Day", and "Evening".
- Remarks:** A text area.
- Table:** A table with 3 columns: ID, NAME, and SALARY.

ID	NAME	SALARY
101	Amit	670000
102	Jai	780000
101	Sachin	700000
- Submit:** A button.
- Menu Bar:** A menu bar with "File" and "Edit" menus. The "File" menu is open, showing "New", "Open", and "Close". The "Open" menu item has a submenu with "Open Project" and "Open File".

- 26) Write a swing program to demonstrate **key and mouse event handling**.
- 27) Write a program to create **dialog box**.
- 28) Write a program of your choice to demonstrate basic Java Applet.
- 29) Write a program to create **database connection** and demonstrate **data manipulation** using **JDBC** (Show Basic **CRUD** operation).
- 30) Write a program to create a file and demonstrate basic file read and write operation.

-----