

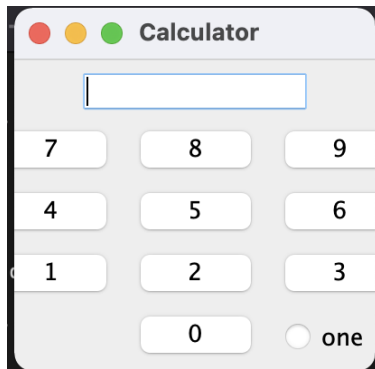
CMSC330 Project 1 – Alex Hong

Directions to compile the program with input file:

Open project 1 cmssc330 folder in command prompt.

Type “java runClass4.java (input file)” in terminal. Press enter.

```
alexhong@Alexs-iMac project 1 cmssc330 % java runClass4.java input
GUI COMPLETE
```



input file “input”:

Window "Calculator" (200, 200) Layout flow:

Textfield 10;

Panel Layout Grid(4, 3, 5, 5):

Button "7";

Button "8";

Button "9";

Button "4";

Button "5";

Button "6";

Button "1";

Button "2";

Button "3";

Label "";

Button "0";

Panel Layout flow:

Group Radio "one";

radio "two";

End;

Button "33";

End;

End.

Process/Lessons learned:

I found this project challenging.

The program scans the input line by line. I kept track of my line position using the Buffered Reader and scanned each line for Non-terminals. Once a terminal was found then it was processed by a method specific for that terminal. For each method a line of input was processed, trimmed, and stripped of unnecessary characters. Then a corresponding swing component was created according to the identifying symbol.

My code is admittedly convoluted and inefficient but I still learned a lot from this project. I learned to implement recursive functions to create panels within another panel and groups of radio buttons until a base case is reached.

Test Cases:

1. Test for Flow Layout (create frame with flow layout)

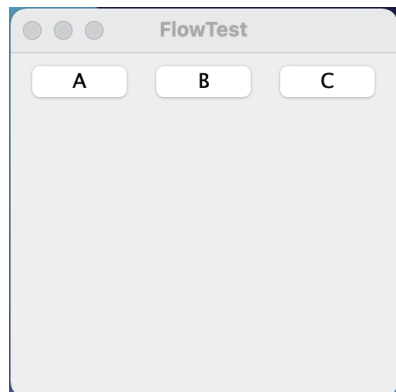
FlowTest file:

Window "Calculator" (250, 250) Layout flow:

```
Button "A";  
Button "B";  
Button "C";
```

End.

```
alexhong@Alexs-iMac project 1 cmc330 % java runClass4.java FlowTest  
GUI COMPLETE
```



2. Test for Grid Layout (create panel with grid layout)

GridTest file:

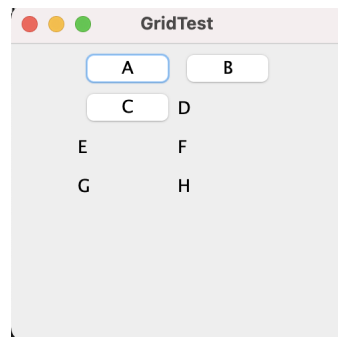
Window "GridTest" (250, 250) Layout Flow:

Panel Layout grid(4, 2):

```
Button "A";  
Button "B";  
Button "C";  
Label "D";  
Label "E";  
Label "F";  
Label "G";  
Label "H";
```

```
End;  
End.
```

```
alexhong@Alexs-iMac project 1 cmisc330 % java runClass4.java GridTest  
GUI COMPLETE
```



3. Test Case 3 - Widget test 1 (TextField, Button, Label creation)

Widget Test 1 File:

Window "WidgetTest1" (250, 250) Layout Flow:

Textfield 10;

Panel Layout Flow:

Button "Button1";

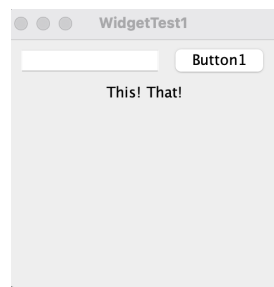
Label "This!";

Label "That!";

End;

End.

```
alexhong@Alexs-iMac project 1 cmisc330 % java runClass4.java WidgetTest1  
GUI COMPLETE
```



4. Test Case 4 - Widget test 2 (radio groups creation)

Widget Test 2 file:

Window "WidgetTest2" (250, 250) Layout Flow:

Group Radio "radio1";

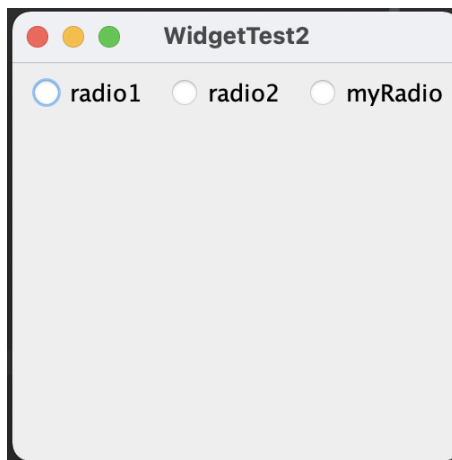
Radio "radio2";

Radio "myRadio";

End;

End.

```
alexhong@Alexs-iMac project 1 cm330 % java runClass4.java WidgetTest2
GUI COMPLETE
```



5. Test Case 5 - nested panel creation

Nested Panel file:

Window "NestedPanelTest" (250, 250) Layout Flow:

Label "myLabel";

Panel layout grid(2, 1):

Button "button1";

Panel layout flow:

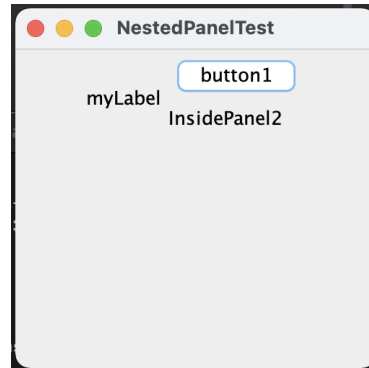
Label "InsidePanel2";

End;

End;

End.

```
alexhong@Alexs-iMac project 1 cm330 % java runClass4.java NestedPanelTest
GUI COMPLETE
```



Error Tests:

1. Error Test 1 ("Window" misspelled: line 1)

Error Test 1 file:

Windo "ErrorTest1" (250, 250) Layout Flow:

Label "myLabel";

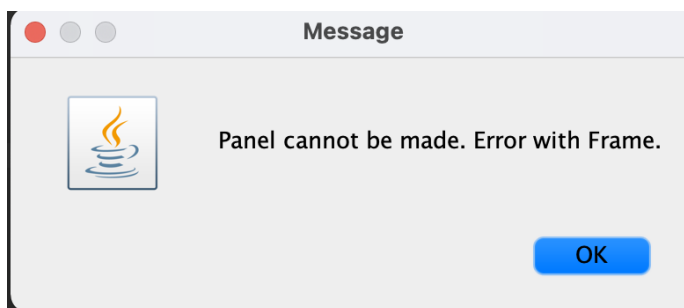
Panel layout grid(2, 1):

Button "button1";

End;

End.

```
alexhong@Alexs-iMac project 1 cm330 % java runClass4.java ErrorTest1
alexhong@Alexs-iMac project 1 cm330 %
```



Program is exited after clicking ok.

2. Error Test 2 (Panel not closed: line 6)

Error Test 2 file:

Window "ErrorTest2t" (250, 250) Layout Flow:

Label "myLabel";

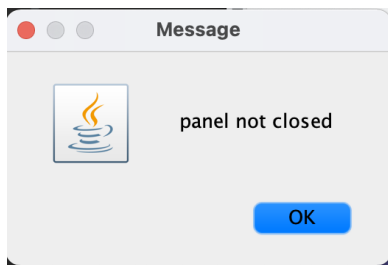
Panel layout grid(2, 1):

Button "button1";

Button "Button2";

End.

```
alexhong@Alexs-iMac project 1 cm330 % java runClass4.java ErrorTest2
```



Program is then exited after clicking ok.

3. Error Test 3 (Trying to run program without argument)

```
alexhong@Alexs-iMac project 1 cm330 % java runClass4.java
The first argument should be a text file.
```

4. Error Test 4 (extra words on TextField Line)

Error Test 4 file:

Window "ErrorTest4" (250, 250) Layout Flow:

Textfield abc 10;

End.

```
alexhong@Alexs-iMac project 1 cm330 % java runClass4.java ErrorTest4
```



5. Error Test 5 (Incorrect parameters for Grid Layout: line 3)

Error Test 5 file:

Window "ErrorTest5" (250, 250) Layout Flow:

Label "myLabel";

Panel layout grid(2, a);

Button "button1";

Panel layout flow:

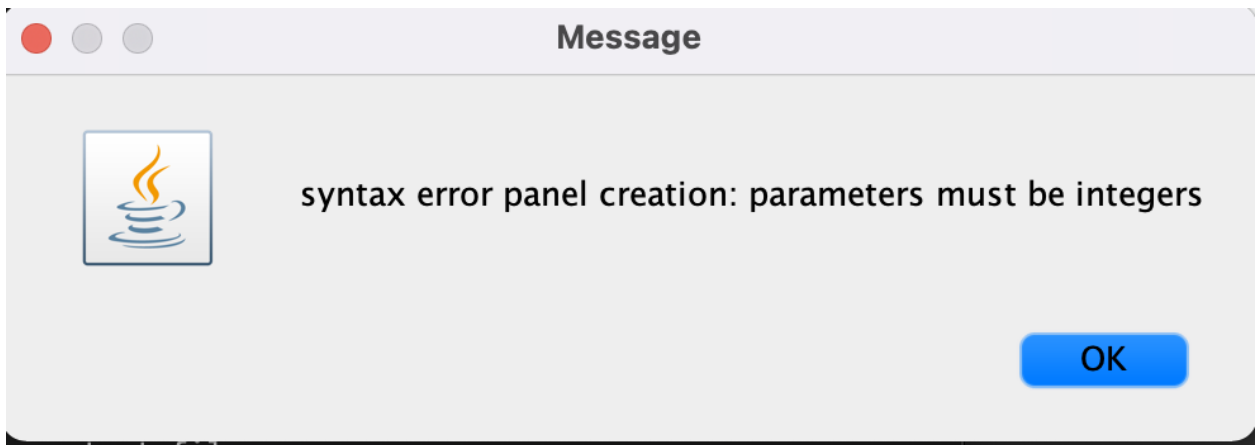
Label "InsidePanel2";

End;

End;

End.

```
alexhong@Alexs-iMac project 1 cm330 % java runClass4.java ErrorTest5
alexhong@Alexs-iMac project 1 cm330 %
```



6. Error Test 6 (opening java file with non existent input file)

```
alexhong@Alexs-iMac project 1 cm330 % java runClass4.java nonExistent

```

