California State University, Sacramento
College of Engineering and Computer Science

CSc 20: Programming Concepts and Methodology II

Lab 09

Objective: This assignment will give you practice with action event handling.

The programming assignment:

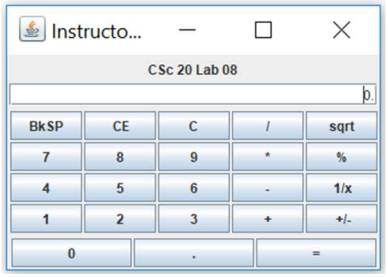
In this assignment you are to add functionality to the calculator created in lab 08. You don't have to make the calculator a full function calculator. You only need to make buttons 0 ~ 9, +, -, *, / and = work.

Some programming hints:

1. Implement an action listener.

```
public void actionPerformed(ActionEvent e) {
        for (int i=0; i<=9; ++i) {
                if (e.getSource() == digitButton[i]) {
                        if (newNumber) {
                                display digit in tf;
                                newNUmber = false;
                        } else append digit in tf;
                        return;
                }
        }
        if (e.getSource() == addButton ){
                opnd1 = Double.parseDouble(tf.getText());
                newNumber = true;
                operator = '+'; return;
        }
        if (e.getSource() == eqButton) {
                opnd2 = Double.parseDouble(tf.getText());
                switch (operator) {
                        case '/': res = opnd1 / opnd2; break;
                        case '*': res = opnd1 * opnd2; break;
                        case '-': res = opnd1 - opnd2; break;
                        case '+': res = opnd1 + opnd2; break;
                }
                display(""+res);
                newNumber = true;
                return;
        }
}
```

2. Register the action listener with all buttons.


Instructo...
CSc 20 Lab 08
0
BkSP
CE
C
/
sqrt
7
8
9
*
%
4
5
6
-
1/x
1
2
3
+
+/-
0
.
=