

## **CS252A Lab5 (Wednesday)**

### **Swing Class**

#### **Problem 1:**

##### **Interactive Grid (30 marks)**

1. Create a grid inside JFrame using Java swing. (5 marks)
2. Use MouseListener to detect if mouse press has occurred on any panel(cell) in the grid. (5 marks)
3. On mouse press on a particular cell change the color of all the cells along both diagonals to the current cell. (10 marks)
4. Also add a label to the current cell indicating its position.(0-based indexing for both rows and columns) (5 marks)
5. All of the previous data should be erased when a new cell is pressed on and its corresponding items(color and label) should now be indicated. (5 marks)

You can use the following links in addition to JFrame and MouseListener documentations for solving this question:

<https://docs.oracle.com/javase/7/docs/api/java/awt/GridLayout.html>

<https://docs.oracle.com/javase/7/docs/api/javawx/swing/JPanel.html>

#### **Problem 2:**

##### **Text Editor (40 marks)**

1. Make a class Notepad for this problem.
2. The menu bar should have two menus – File and Edit
3. File should have sub menu – Open, Save, Save As, Exit.
4. Edit should have sub menu - Cut, Copy, Paste, Select All.
5. When user selects the text and chooses cut/copy-paste, the text should change accordingly and by clicking on Select All, all text in textarea should be selected.
6. Associate keyboard shortcuts for various actions as follows -
  1. Open - ALT + O
  2. Save - ALT + S
  3. Save As - CTRL + ALT + S
  4. Exit - ALT + W
  5. Cut - ALT + X
  6. Copy - ALT + C
  7. Paste - ALT + V
  8. Select All - ALT + A
7. When choosing save as/open a menu should popup asking for filename. In case of save if file was already saved once overwrite the file else same as save as. In case of open if file does not exist an error must be thrown stating File not found.
8. When user chooses Exit, application should close.

You can use the following methods in addition to JFrame and ActionListener documentations for solving this question: `setAccelerator()`, `JFileChooser()`.

Marking Scheme :

Writing Functionality for File - 20 marks

Writing Functionality for Edit - 20 marks