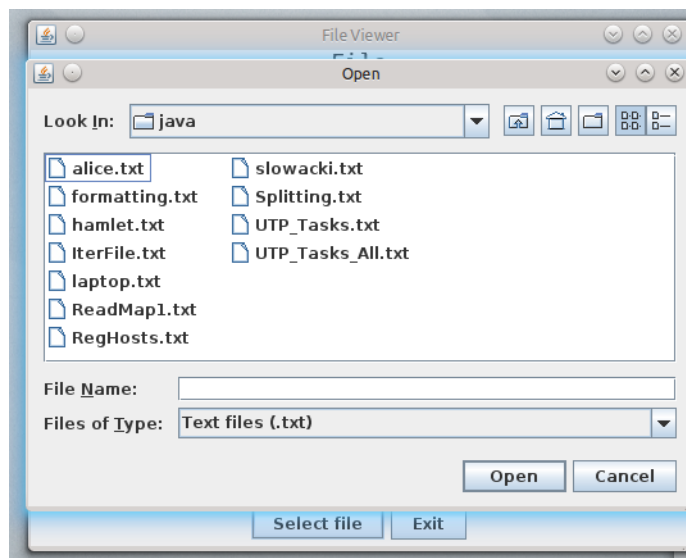


Problem 1

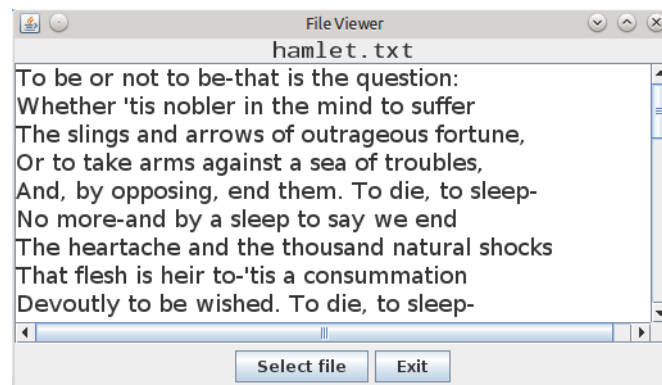
Write a program which displays a GUI with

- a text area with the content of a text file;
- a panel with two buttons: pressing one of them closes the application, pressing the other displays a dialog of type **JFileChooser** allowing the user to select a file — only files with extension **txt** should appear;
- a label with the name of the file currently shown in the text area.

Selecting a file will look like this:



and after a file has been selected, we should see its content:

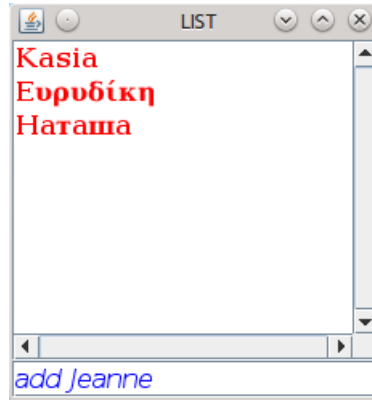


Note: You can force the text area to scroll to the bottom after a call to append like this:

```
textArea.setCaretPosition(textArea.getDocument().getLength());
```

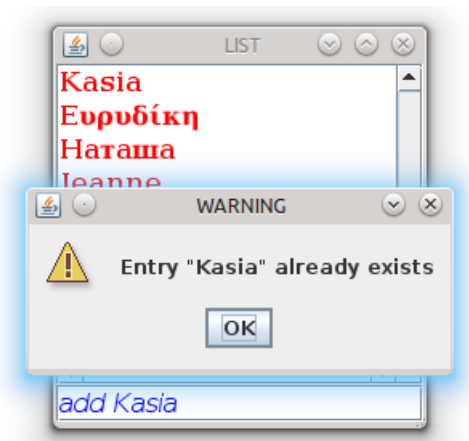
Problem 2

Write a program displaying a list (object of class **JList** ‘embedded’ in a **JScrollPane**) and, below, a text field (**TextField**).



The user can type in the text field:

1. **add word**: the word appears in the list, if it was not there; if it was, a warning is displayed and the word is *not* added again;



2. **del word**: the word is removed from the list if it was there, if it was not, a warning is displayed;
3. **quit**: closes the application.

Use your own class extending **AbstractListModel** and implementing abstract methods **getElementAt** and **getSize**; provide methods for adding and removing elements (not forgetting about calling **fireIntervalAdded** and **fireIntervalRemoved**).
