

CS108 Assignment 6: Graphical User Interface (GUI)

DUE DATE: THURSDAY 4 NOVEMBER 2004, email to me by 5pm

Learning Objective

Learn how to build a simple graphical user interface for an application. Also, learn how to separate the interface (the GUI) from implementation (the application class that does the “real work”).

Problem Statement

Most application developed for the Windows and Macintosh operating systems have graphical user interfaces. In this assignment, you will create a simple GUI interface for an application you have previously developed.

The GUI you will develop should be built using the NetBeans graphical-user-interface drawing palette, and will take the structure of a single window. It is your choice which application you want to write the GUI for: the PhoneBook, LoanPaymentCalculator, or GrepLike.

Your GUI should:

- Create a window at start up.
- Display the application name in the title bar.
- Provides intuitively named fields and buttons.
- Take input from the user as required by the application you choose.
- Interact with your existing application class (calling methods to perform the “real work”).

Programming hints

- Getting Started: after you choose which application you want to do, start by drawing the GUI form – don’t worry about code yet, just work on the interface (look/feel).
- Use the properties dialog to give each GUI widget a meaningful name (e.g. call a button by it’s purpose, “exitButton” to exit the application, not “jButton1”).
- Try building and running the application. It won’t do anything yet, but it should look right.
- Now add your application’s implementation class (e.g., PhoneBookDataStore, LoanPaymentCalculator, GrepLike). You will create a member variable in your GUI class for the implementation class, and initialize it as needed (constructor or first use).
- NetBeans will do most of the “code generation” to enable the events. You will just need to do a bit of code to interact with your application class. Implement the methods needed to collect data from the form and call the methods on your implementation class, as well as displaying the result.

Deliverables

- The java code file(s) (*.java).
- An executive summary of no more than 1 page, which will serve to introduce the GUI application. In addition, discuss how your GUI enhances the user’s experience, as well as how the separation of interface and implementation simplifies the programmer’s experience.

QUESTIONS: EMAIL ME: azs@bu.edu