CS102 - Algorithms and Programming I

Lab 04

Lab Objectives: Java Graphical User Interfaces.

For all labs in CS 102, your solutions must conform to the CS101/102 style guidelines.

LAB RULES:

- You are allowed to refer to your lecture notes and textbooks during lab sessions. You are not allowed to talk or exchange any form of information with your classmates. All solutions should be your own. If you have questions, please consult your TAs or tutors.

- When you are done ask your TA to come by and s/he will ask you questions about the assignment and have you sign the attendance sheet. You must attend the lab session and show your code to the assistants to receive a grade for the lab.

Objectives:

- JCheckBoxes, JRadioButtons
- GUI Events.
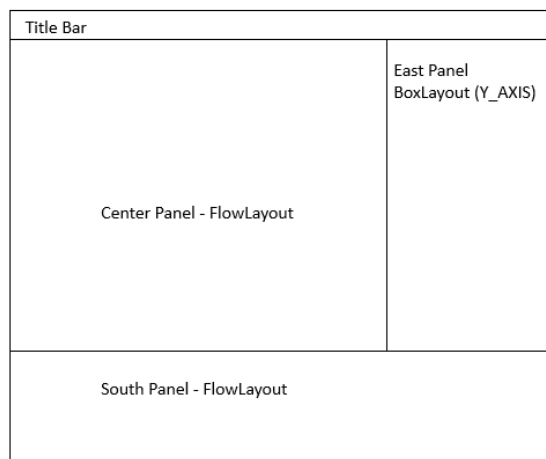- GUIs that interact with objects/applications.

1. Download the files, Product.java, Catalog.java.

2. The Catalog class contains a list of products (stored as an ArrayList). The constructor creates the ArrayList, and initializes the Products in the ArrayList.
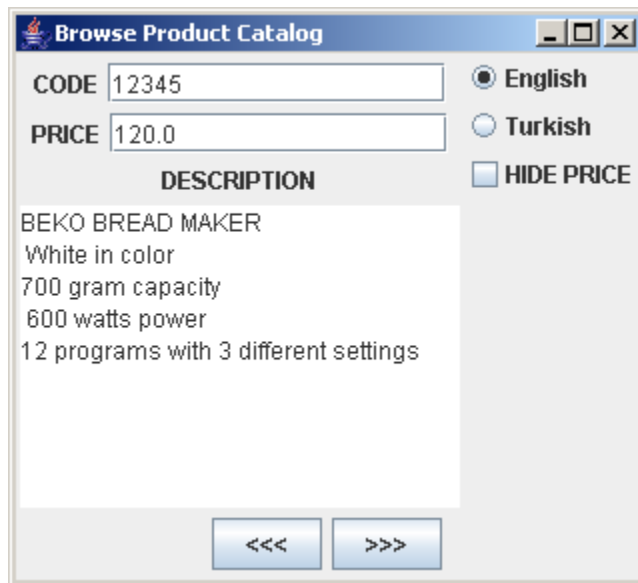
   This class has two methods:
   a. getProductByPosition(int pos) - returns the Product in the productList ArrayList at the position (index) passed as parameter,
   b. getCatalogSize() – returns the size of the productList ArrayList.

3. **In class CatalogGUI create the GUI shown with the given functionality.**

   Hint: use sub panels in your GUI according to the the following diagram:

DISPLAYING THE GUI
→ When the GUI first appears, it should display the **FIRST** Product in the Catalog. By default, the English radio button should be selected, and the English description should display.

NEXT BUTTON (>>>)
→ Display the next Product in the catalog.
→ If the current Product is the last Product in the Catalog, when the user clicks next, you should display the first product in the Catalog.
→ Remember to display the correct description according to the language that is selected (Turkish or English).

PREVIOUS BUTTON (<<<)

→ Display the previous Product in the catalog.
→ If the current Product is the first Product in the Catalog, when the user clicks previous, you should display the last product in the Catalog.
→ Remember to display the correct description according to the language that is selected (Turkish or English).

ENGLISH/TURKISH Radio Buttons
→ Each product in the catalog has a Turkish description and an English description.
→ When the user selects the "Turkish" radio button, the current products Turkish description should display. English should display if the user chooses English.

HIDE PRICE Check Box
→ When the user selects the checkbox hide the price field and the price label.
→ When the user deselects the checkbox, make the price field and the price label visible.