BTH545 Workshop 3

Learning Outcomes

- Designing interfaces that focus attention and enforce an ordered flow to the filling in of the information in the interface,
- Using techniques to focus attention on parts of the interface,
- Employing buttons, input fields, lists and checkboxes to build an interface.

Design (30%)

You are to design a pizza ordering application which will allow the entry of the following information:

- Allows for the entry of the name and address (street, optional apartment number, city, and postal code) to which the pizza should be delivered,
- Specifies the size of the pizza (one of small, medium or large),
- Specifies up to three toppings for the pizza (ham, pepperoni, green pepper, mushroom, pineapple, onion, artichokes, black olives, and extra cheese). Note that extra cheese is only available on the small and medium sizes.
- Buttons to reset the pizza information (but not the address) to the default settings, cancel the order which will terminate the application and to order the pizza, which will display a dialog with a summary of the order, asking for confirmation. If confirmed, the application will close while if rejected by the dialogue, it will return to the ordering application to allow the order to be modified or cancelled.

There are several principles you need to follow when designing the application.

- The interface needs to be designed to focus attention so that the different areas of the interface are clearly identified and separated from one another.
- The design of the interface needs to cause the user to supply the information in a logical manner. While it is good to allow the user to fill in the information in whatever order they prefer, the interface should lead the user through the process in a logical manner.
- It is better to make mistakes impossible rather than giving the user an error message. Design a solution which will prevent the user form ordering extra cheese on a large pizza. Make sure this works correctly if the change the size of the pizza after they select the toppings. You also need to ensure that no more than three toppings can be ordered. How can you check address information as it is entered rather than waiting until the form is submitted? Error messages should be a last resort as users find them to be demeaning. Can you find a friendlier way of indicating there is an error?
- Visibility of system status is also a design goal. This means that all the information about the pizza order should be visible to the user at all times.

The first portion of the assignment is largely based on design. You should use whatever drawing tool you want (including a pen or pencil) and render an image of your interface for the pizza application. You should submit images as JPG or PNG files.

Implementation (30%)

The goal of the implementation portion of the workshop is to build the interface you designed as a Qt application, deploy it, and attach the zip file to the Blackboard page for the workshop.

Reflection (40%)

The reflection should be written in a file called reflect.txt and attached to the blackboard submission. Write explanations for the following design decisions you made. Do not give trivial answers but explore the topics in depth.

1. Explain how your interface prevents the user from making mistakes.
2. Explain how your interface design leads the user to fill in the information in a logical order.
3. Explain how you were able to detect mistakes before the form was submitted and how you notified the user that there were mistakes.
4. Explain the techniques you used to focus attention on various parts of the interface.