Lab Task 3

Assumptions

Classes associated with the abstract factory pattern -

* UIElement and UIElementFactory
* HighDetailedUIElementFactory, SimplisticUIElementFactory
* All elements classes (button, textbox, editbox) related to both the above mentioned classes
* Interfaces to connect the specific element classes to their design types

Classes associated with the singleton pattern -

* ConfigManager

Classes associated with the adapter pattern -

* XMLParser
* XMLToConfigAdapter
* Config - the UI element organizer

Other classes -

* WindowManager - core UI class
* Driver - driver class of the whole assignment

The assumptions made for the completion of the assignment tasks are the following -

* The window manager serves as a simple graphical representation of different elements, such as, text boxes, text fields, and buttons.
* None of the graphical elements are to have functionalities implemented with them. Only some properties depending on the type of design styles can be customized.
* The WindowManager will require the design style specification for proper functioning.
* Design configuration details can be extracted via both an XML file or directly from the user via the terminal. The user has to provide the XML file path through the terminal.
* The user can change the color of the elements via the terminal for the simplistic design style. They would have to provide the hexadecimal value for their desired color through the terminal. For the high detailed style, they can provide the font size as well as the color through the terminal.
* A simple terminal menu is to be used for communication with, and initialization of the WindowManager.
* The design style of a window can be changed but functionalities will differ as per the task description.