

CSSE 374: Lab 5-2

Create **Lab5-2.pdf** with answers to the following problems:

Part 1

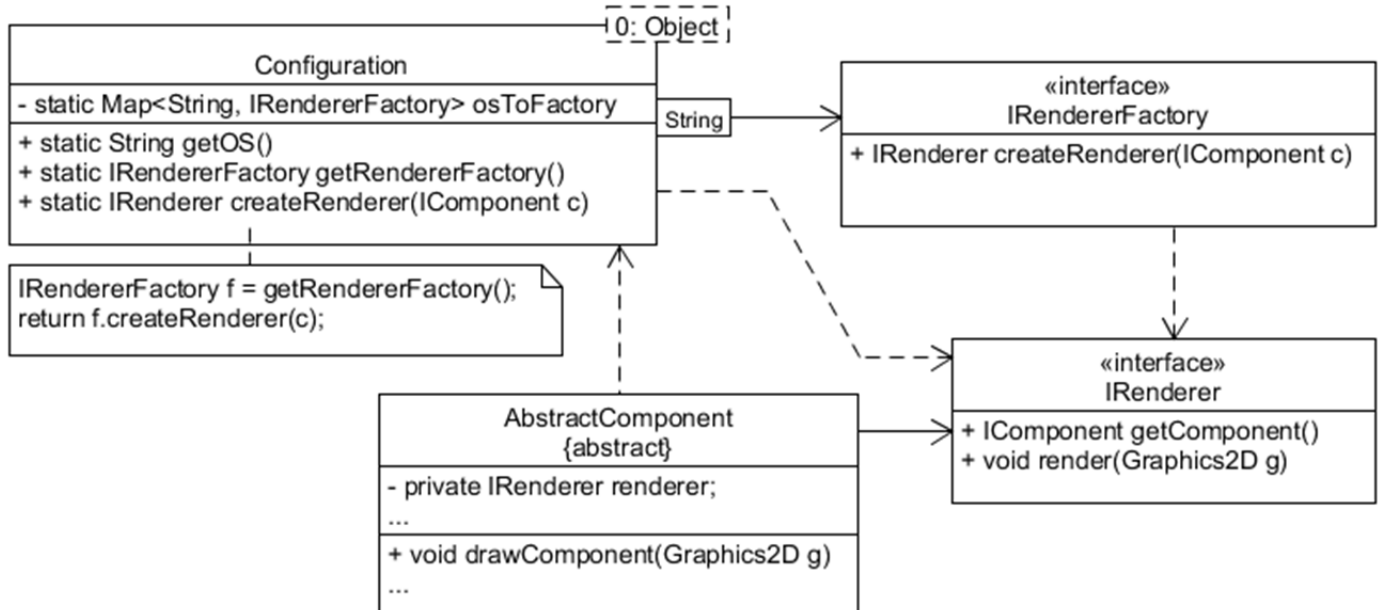
Download the solution for Lab 3-1 from Moodle -> Resources -> Solution. Identify all of the places in the code where the Principle of Least Knowledge (PLK) has been violated. Provide the following information:

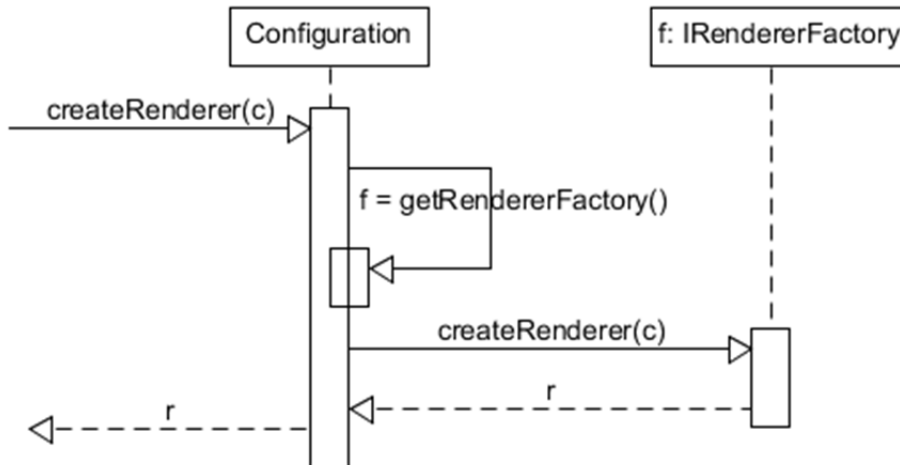
Q1. List class(es), method(s), and line number(s) where PLK has been violated and in a few lines **explain** how to fix them. [5 points]

Constructor of AbstractComponent at line 40. AbstractComponent needs to know both about Configuration and IRendererFactory. The problem can be fixed by adding the createRenderer(IRendererFactory) method to Configuration and having it create the IRendererFactory object internally and returning the IRenderer object directly.

Note that this.getComponent().getText() ⇔ this.component.getText() in renderers, which is not a violation of PLK.

Q2. Consider one instance of the violations. Describe your solution using both a UML class diagram and a UML sequence diagram. You are only required to include the classes that are affected by your changes in the diagrams. [10 points]





The solution varies wildly for Part 2, so non given.

Part 2

Research about a popular framework/library that uses the Façade pattern. Explain how the Façade pattern is used in that library by providing the following information:

Q3. What is the general purpose of the framework/library. [5 points]

Q4. Using UML class diagram show how the Façade pattern is used in the library. Here are the items that you must document:

- | | |
|---|-------------|
| a. The Façade class with some of the relevant methods | [5 points] |
| b. The class that uses Façade to do its job or the client of the Façade class. | [5 points] |
| c. Some of the important classes that the Façade uses and their relevant methods. | [10 points] |
| d. In a few sentences, explain how the design works. | [10 points] |

Deliverable

Turn in the **pdf** on Moodle.