Advice Software Quality

1. The Factory Method is a creational design pattern that returns products that are bound to a common interface or share a base class. The returned objects are consistent, but there are still variations in them.

Benefits of using the Factory Method: It helps to maintain your code by reducing tight coupling. It centralizes the object creation logic in one place, so the code becomes more organized and easier to understand. Additionally, the pattern is flexible and allows us to add new types of objects into our program without having to change existing code.

Drawback of using the Factory Method: The pattern may require creating multiple subclasses, which could make the code more complicated.

The Factory Method can be implemented in the creation of slides, bitmap item and text item. By using this method, it is possible to create different types of elements within the slides, and this method allows flexibility in creating them. It could also decrease resource consumption, because the objects are created more efficiently.

2. The Command Pattern is a behavioral design pattern that wraps a request into an object.

Benefits of using the Command Pattern: Loose coupling since it allows the responsibilities between the sender of a request and the receiver to be separate. It is flexible since new commands can be added without modifying existing code. It also supports undo operations which stores the previous state of an object, and this can be useful for slides if the user wants to undo changes.

Drawback of using the Command Pattern: Implementing this pattern can make the code more complex, especially if there are many different commands and receivers involved.

The Command Pattern is used to implement multiple commands for manipulating slides. For example, commands like NextSlideCommand, PreviousSlideCommand, QuitCommand, NewFileCommand, and DeleteFileCommand use specific actions that can be executed on the slides. By using this pattern, our project is more flexible in handling user interactions with slides. Changes were made to the Presentation and KeyController classes to better fit the command pattern.