

Reflection

Implementation effort & changes required

For subtask A, we implemented plugins for colors, authentication, encryption and the two UIs. Those components can be configured from the **Main** class. The plugins required more effort to implement than implementing the feature itself. The developer has to think in advance but can more precisely define the interface the plugins will use. That makes the code base more extendible and reusable and also enables the developer to more easily share their solutions in a way that others can contribute to the project. For color, the implementation was most difficult, as it was necessary to extract the UI color selection component, as well as the some text display components into a separate module/class. In total this required us to change 2 existing classes, add an interface and 2 implementations of that interface. For the authentication, the required effort was less. This only required extracting the code to send and check the password. It required slightly changing the **Server** and **Client** class, as well as adding a new interface and two implementations of that. The encryption plugin required the least effort, since this was already a seprate 'black-box' component in our initial implementation. In fact, this did not require any change at all. It can be modified by adding **EncrypterDecrypters** to a list. For the Server and Client UI, we have based the configuration on the previous assignment. This did not require a great deal of effort, since the functionality of the 'UI' feature is not very interwoven with other parts of the project. For this we did not have to change any of the existing classes (except trivially implementing an interface for an existing function, and changing **Main**). And we added an interface and two implementations of that interface.