The new subsystem decomposition uses two design patterns, the façade design pattern and the composite design pattern. The façade design pattern is used multiple times. When any subsystem interacts with the storage subsystem it uses a façade class (StorageController) to abstract the setting and retrieval of information in the persistent storage. It is also used when the checkout subsystem retrieves information from the shoppingcartmanagment subsystem, it also is used with the refresh and viewTextbook subsystems interact with our localstorage subsystem.

The composite design pattern will be used in the client’s gui. Classes like qbutton that inherit qwidget will be used inside of other qwidget classes like qdialog.