**Design Patterns**

**Decorator:** The Protecc Command Center utilizes the Decorator design pattern. The intent of this pattern is to dynamically attach additional responsibility to objects. This is shown in the design class diagram by the different sensors. Each have different responsibilities when it comes to detecting issues (ie. a camera detects movement, or a gas leak detector has a certain reading). Each device has an inherited detectIssue method, but decorators are used to adjust how the issue is detected and what is done about it.

**Composite:** The composite design pattern allows individual objects and compositions of objects to be treated uniformly. This is demonstrated within the design class diagram with the Locks class. The Arming Controller has a lockEntries method that locks all the entries simultaneously. Hence a Locks object and Lock object can be treated the same way. This simplifies the Lockdown use case and ensure all of the locks act uniformly.