Design patterns:

**Open/Closed**

**Text

Description automatically generated with medium confidence**

Location:



Rationale: There is an abstract class called *ChartModelBase* to which there are 2 inheritors implementations called *ChartModelImpl* and *ChartModelResource* that are open to change and the abstract class is closed because methods in the abstract superclass are preserved, and the system can be extended by providing different implementations for each method in the subclasses.

**Observer**

**Graphical user interface, text, application, email

Description automatically generated**

Location: 

Rationale:

This class methods are called whenever there are some actions on a node of the Pert Chart, changing some data in the main app. These actions can be a mouse drag, a mouse move, a mouse click, etc.

**Façade**

Graphical user interface, text, application, email

Description automatically generated

Location:



Rationale: This façade serves as a way for the user to interact with the task hierarchy tree hiding more complex functionalities like interacting with left and right nodes, iterating the tree and so on from the other classes. It saves the user the task and trouble to make a class to interact with the Task Hierarchy tree.