Design Patterns

1. Command Pattern

public class ZoomActionSet {

private final ZoomInAction myZoomIn;

private final ZoomOutAction myZoomOut;

public ZoomActionSet(ZoomManager zoomManager) {

myZoomIn = new ZoomInAction(zoomManager);

myZoomIn.putValue(Action.SHORT\_DESCRIPTION, null);

  myZoomOut = new ZoomOutAction(zoomManager);

myZoomOut.putValue(Action.SHORT\_DESCRIPTION, null);

  }

public GPAction getZoomInAction() {

    return myZoomIn;

  }

public GPAction getZoomOutAction() {

    return myZoomOut;

  }

}

Location: ganttproject\src\main\java\net\sourceforge\ganttproject\action\zoom\ZoomActionSet.java

The ZoomActionSet class is used as a Command Pattern in this program. This class manages the concrete commands zoom in (represented by the ZoomInAction class) and zoom out (represented by the ZoomOutAction class).

1. Singleton Pattern

private static final GanttLanguage ganttLanguage = new GanttLanguage();  
private GanttLanguage() {…}  
public static GanttLanguage getInstance() {return ganttLanguage;}

Location: ganttproject\src\main\java\net\sourceforge\ganttproject\language\GanttLanguage.java

The GanttLanguage class only has one instance created at all times, providing a way to access it through the getInstance() method. It creates the instance at initialization and has a private contructor, making it impossible to create another instance.

1. Facade Pattern

    // Geometry of the window

    addAttribute("x", "" + x, attrs);

    addAttribute("y", "" + y, attrs);

    addAttribute("width", "" + width, attrs);

    addAttribute("height", "" + height, attrs);

    addAttribute("maximized", String.valueOf(this.isMaximized), attrs);

    emptyElement("geometry", attrs, handler);

    // ToolBar position

    addAttribute("position", "" + toolBarPosition, attrs);

    addAttribute("icon-size", "" + iconSize, attrs);

    addAttribute("show", "" + buttonsshow, attrs);

    emptyElement("toolBar", attrs, handler);

    addAttribute("show", "" + bShowStatusBar, attrs);

    emptyElement("statusBar", attrs, handler);

[…]

Location: ganttproject\src\main\java\net\sourceforge\ganttproject\GanttOptions.java

The GanttOptions class is used as a Facade Pattern in this program. This class acts as a middleman between the program and the options’ classes, hiding these and their complexity.