

Hausaufgabe 8

- Vorbereitung: Look at the Code in *ss2011.dp.drawapp*-Package:
 - Start the DrawApplication
 - Draw Lines by dragging
 - Draw Rectangles with the Alt-Key pressed
- Teilaufgabe 1: Identify Patterns in the Code:
 - add a Comment saying „This is Pattern X“, explain what pieces of the code participate (Methods, Classes etc.), min 20 words each.
 - Hint: There are at least different Patterns used!
- Teilaufgabe 2: Refactor Code, apply Patterns
 - Find at least one place in the Code, where the Strategy or State Pattern can be applied
 - Change that: Implement State or Strategy there!
- Teilaufgabe 3: Extend Functionality of the DrawApp
 - By pressing Shift, it should be possible to draw Ovals. Extend the code accordingly!
- Generell gilt: kürzer ist besser, Kommentare willkommen 😊

Hausaufgabe 9 (setzt auf HA8 auf)

- Implement a simple Select Mechanism:
 - When clicking on the DrawPanel, collect one (easy) or all (advanced) AbstractGraphics instances under the Cursor with a Visitor
 - Remember the selected Objects in DrawApplication...
- Implement Actions and Operations for the five Toolbar-Buttons: Cut, Copy, Paste, Undo, Redo, each one as separate Class
 - Functionality of Cut, Copy, Paste, doesn't have to use the system clipboard, just within this program.
 - Functionality of Undo, Redo should be an unlimited stack
 - Use the Command Pattern, subclass *AbstractOperation*
 - Create Command instances with the FactoryMethod Pattern
- Implement a ActionDecorator for logging Actions: Use *System.out.println (...)* when Actions are invoked.
- Bonus: Group your Operations using the Composite Pattern:
 - Multi-selection operation should result in one undo/redo step!

Hausaufgabe 9: Bonusteil

- Implement a PolygonPlugin as separate Project in Eclipse.
- The Plugin should add the functionality to draw polygons in the DrawApp when Alt+Shift is pressed. Single mouseclick adds a new segment, doubleclick ends the polygon.
- The Code of the main project DP_SoSe2011_HA8 must not have any dependency to the plugin code, except one String reference is allowed! Hints:
 - You have to use a classloader, e.g. URLClassLoader, to access the code from PolygonPlugin when starting DrawApplication.main().
 - You have to use reflection to invoke Code from PolygonPlugin in the DrawApp context. Keep reflection usages as low as possible, ideally one.

Abgabe:

- Bis 20.7.2011, 15:00 Uhr
- Abgabe per Mail an ruben.jubeh@uni-kassel.de
- Betreff: DesignPatterns_HA8_<Matrikelnr>
- .zip im Anhang (Siehe nächste Folie)
- (HA8 und HA9 können in einem ZIP abgegeben werden)

.zip Format

- Bevorzugt: exportiertes Projekt als Zip-Archiv (File->Export->General->Archive File->(Projekt anklicken))
- Oder gezippter Workspace (!) mit nur einem(!) Projekt drin ...
- Bitte keine .rar / .tar etc.