

ASSIGNMENT A4

1. Objective

The objective of this assignment is to allow students to become familiar with the Composite and Visitor design patterns.

2. Application Description

Use Swing/C# API to design and implement an application for task management in a software company. A project is composed of a set of project items, where a project item is either a task (new feature, improvement, technical task) or another project. A project item is characterized by the following attributes: description, date submitted, estimated time, status, date completed, the software developer responsible for its completion. The task management system should allow (i) project managers to assign tasks, check the project status, evaluate the duration of a project and (ii) software developers to update the status of project items.

3. Application Constraints

The data will be stored in a database or in a set of XML files. Choose and use an architectural pattern in designing the application. Use the Composite design pattern for projects and tasks representation and the Visitor design pattern for updating the status of project items and (re)assigning the project items.

4. Requirements

- Create the analysis and design document (see the template).
- Implement and test the application.

5. Deliverables

- Analysis and design document.
- Implementation source files.

6. References

<http://java.sun.com/docs/books/tutorial/uiswing/>

<http://java.sun.com/j2se/1.4.2/docs/api/javax/swing/package-summary.html>

<http://www.exampledepot.com/egs/?>

<http://www.oodesign.com/visitor-pattern.html>

http://en.wikipedia.org/wiki/Visitor_pattern

<http://www.oodesign.com/composite-pattern.html>

http://en.wikipedia.org/wiki/Composite_pattern