

CS 494 Exam 2
Spring 2006

Name: _____

E-mail ID: _____

There are three questions on this exam, and are worth 30 or 40 points each. All questions will allow for partial credit. Please pace yourself accordingly!

This exam is pledged. Please sign the pledge here:

Question 1	_____/30
Question 2	_____/30
Question 3	_____/40
Total	_____/100

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Question 1 (30 points): For the design patterns that we have studied since the first exam, give a BREIF description of each. The description should include what problem the design pattern solves and/or how it manages to solve it. Ideally, each design pattern's description should not exceed 30 words (we won't take off points if you go over, but if you write an entire essay, you won't get credit).

Bridge

Adapter

Chain of Responsibility

Command

Proxy

State

Decorator

Prototype

Template Method OR Factory Method

Question 2 (30 points): For each of the GRASP principles, give a BRIEF description of each, describing what it does, and why the principle is important.

Creator

Information Expert

Low Coupling

Controller

High Cohesion

Polymorphism

Pure Fabrication

Indirection

Protected Variations

Question 3 (40 points): This question will examine a single pattern in more detail. Pick one of the patterns listed in question 1, but not template method or factory method (you can also use Interpreter, if you want – although we haven't studied this in lecture yet). For your chosen pattern, you need to show the following:

- Clearly state which design pattern you are using.
- A UML structure diagram for a SPECIFIC example (not the generic structure). This should follow the UML standard (which is the same as with your class diagrams from your homeworks)
- Two consequences or implementation issues (or 1 of each) for that pattern
- A second example that this pattern can be used for. You should give the names and BRIEF descriptions of the classes that this second example would use (we aren't looking for you to write code here – just a description of what it would entail). If you can't think of a second use, you can explain the code for your UML diagram for some partial credit.

This page is for additional space for question 3.
If you need even more space, you can use page 2 of this exam.