Final Project

Overview

The final project is a chance for you to design and implement a program of interest, while using some of the design patterns covered in the course to structure your code. It should be about the size of one of the longer Harry Potter examples in the book, written in Java, and use one design pattern from each category (creational, structural, and behavioral), although you are free to use more if you wish. The work should be your own, and not have been submitted for another course, but the choice of topic is entirely up to you, and you can be as creative as you wish.

Evaluation

The project will be evaluated by assessing different components (e.g., design, execution, writeup, originality, and difficulty), as is standard practice in computer science classes. This balances out the differences in projects (e.g., a simple one that works perfectly vs. a complicated one that isn't fully functional), and thus enables everyone to get credit for the strengths of their program.

What to submit

Submit a zip file of all your .java files, along with a writeup. The writeup should include a description of your project and how to run it (you can include screenshots of it in action if you wish), the design patterns you used and why you chose them, and a UML diagram that includes all the variables and methods in the program.

Academic Integrity

Boston College takes academic integrity seriously (academic integrity). The project must be designed and written entirely by you, and not make use of code or materials from outside sources. If you have any questions about what is permitted, it is always better to ask.

Design Patterns

Creational
Singleton
Factory
Builder
Prototype
Abstract Factory

Structural
Decorator
Flyweight
Facade
Composite
Adapter
Bridge
Proxy

Behavioral
Strategy
State
Template Method
Command
Observer
Chain of Responsibility
Memento
Mediator
Visitor
Iterator
Interpreter