

CENG 557 Advanced Design Patterns

Assignment 2: Software for XYZ Company

Requirements:

The XYZ company has two departments; production and packaging.

The production department prepares ordered products from a catalogue, which contains books, foods, and music instruments. Books are grouped as drama, adventure, and science fiction. Foods are classified as fresh and frozen foods. Music instruments are clustered as string and vocal instruments. For each ordered product, we need an appropriate type of producer for it.

The packaging department provides packaging and mailing out various product. The characteristics of a given product will determine what packing materials are necessary to safely ship it. That is to say, the packaging required to send a book will differ dramatically from the packaging necessary to send a watermelon or a violin.

These different forms of packaging up products can be thought of as unique packaging strategies. The strategy for most paper mail is typically envelopes and stamps, while the strategy for packaging perishable food may require a box, packing foam, and possibly even dry ice. The packaging department can look at each individual product and implement the most suitable strategy to package it safely and efficiently.

Write necessary software for production and packaging departments using design patterns.

Deliverables:

UML class diagram(s) in a pdf file

UML sequence diagram(s) in a pdf file

Java or C# implementation

Assignment Rules:

1. In this lecture's homework, there are no cheating allowed. If any cheating has been detected, they will be **graded as 0** and there will be no further discussion on this.
2. You are expected to submit your homework in groups. Therefore, **only one of you** will be sufficient to submit your homework.
3. Make sure you export your homework as an **Eclipse Project or C# Solution**.
4. Submit your homework through **CMS**.

5. Name and export your Project with your assigned **group ID** (which will be announced on CMS) as the given format below:

CENG557_G05_A2.zip

6. Please be informed that your submissions may be anonymously used in software engineering related research studies. Your names and student IDs will be replaced with non-identifying strings. If you do not want your submissions to be used in research studies, please inform the instructor (Dr. Tuglular) via e-mail.