Due Date: Nov. 10th, 2019, 23:55

**CENG 557 Advanced Design Patterns**

**Assignment 1: Cargo Courier Software**

**Requirements:**

The main purpose of this project is to build a software for transferring goods from a seller to a buyer or buyers by suitable means of transportation. This software will help to keep the records of various things such as courier details, product details, client (both seller and buyer) information, items list, details of shipments and consignments. This software will keep the records of shipment and its details and the details of any delivery can be searched. The person only needs a user Id and password provided by the admin of the system. This system will simplify the transportation system and will help in tracking the shipments. Shipment states are Ordered, Paid, Loaded, InTransfer, Received. This will be a both console-based and rich-client software which will be used by the various enterprise to manage and keep the records of shipment. The courier facility will be available in the entire country and the goods will be sent by appropriate vehicle (motorcycle, van, truck, or trailer) depending upon the size. Data will be stored on the computer (assume it an online server), the user can only view their own product and shipment details. The software will store the data in either XML or JSON files depending on the type of data. Client and courier data will be in XML files and shipment data (transactions) in JSON file. The proposed software will automate the complete operation on the courier site and will provide detailed information on shipments. The user accounts (clients and courier admin) and main data are uploaded at initialization and saved at the termination of the software. Transactions are stored at the instant they happen. Assume that appropriate courier is always available. Courier admin will decide the price of the courier, type of the courier and finalize the shipment, while clients can send or accept the goods and can track all the details regarding the product.

**Deliverables:**

UML class diagram(s) in a pdf file

UML sequence diagram(s) in a pdf file

UML state diagram(s) in a pdf file

File design(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\_A1.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.