

## ASSIGNMENT A2

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### 1. Objective

The objective of this assignment is to allow students to become familiar with the Model View Controller architectural pattern and the Factory Method design pattern.

### 2. Application Description

Use Java/C# API to design and implement an application for the employees of a book store. The application should have two types of users (a regular user represented by the book store employee and an administrator user) which have to provide a username and a password in order to use the application.

The regular user can perform the following operations:

- Search books by genre, title, author.
- Sell books.

The administrator can perform the following operations:

- CRUD on books (book information: title, author, genre, quantity, and price).
- CRUD on regular users' information.
- Generate two types of reports files, one in pdf format and one in csv format, with the books out of stock.

### 3. Application Constraints

- The information about users, books and selling will be stored in a database, not freaking XML files. Use the Model View Controller in designing the application. Use the Factory Method design pattern for generating the reports.
- All the inputs of the application will be validated against invalid data before submitting the data and saving it.

### 4. Requirements

- Implement and test the application
- Everything through [www.github.com](http://www.github.com)

## **5. Deliverables**

- Implementation source files
- Proper GitHub repository

## **6. References**

<https://github.com/UTCN-SoftwareDesignLab/SoftwareDesign2018>

Oh, and Google.