**Online course Management Project**

**Roles (User class):**

* Instructor

**General use cases:**

* User Registration (Instructor),
* Login: Instructor Login
* Course Library
* Assignments Library
* Leader board (Optional)

**Instructor use cases-**

* + create, Modify, Delete course
  + Create Course Library
    - create topics & sub-topics, create Course Plan,
  + Create, Modify & delete assignments
    - Add assignment Description, add deadlines, Set marks
  + Publish Leader board (Optional)

**Project Specifications:**

in memory Database

**3 Layered architectures**

* UI Layer
  + Scanner or buffered readers
  + Deals with Input/Output operations
* Service Layer
  + Business logic
  + Validations
* Data Access Objects Layer
  + Data access logic: Collect Data from collections (or DB later)

UI -> Service -> DAO

!<-

[ a->b: a dependent on b

a!<-b: b not dependent on a]

**Models**:

Data carriers from one layer to another layer

Simple POJO class object as DTO (data transfer objects)

**Layers using Packages:**

* UI
* Service
* DOA
* Models
* Database

**Project Guidelines:**

* Follow clean Code & Clean Design Principles
* Loosely coupled code
* Use Design Patterns
* Design it in a plug-in plug-out way
* Avoid cyclic Dependencies
* Use JAVA 8 features
* Not supposed to fail in any case (Can handle any kind of exception)

Deadline for 1st Review: 7th March 2022