Flooring Mastery

- Create a CRUD application using MVC and Spring for DI - enables loose coupling

- Must use IO to store and retrieve data in Directory containing multiple files of unique names determined by order date

- Take in user information - return new order with cost calculations and give them option to save or not

- Have full set of unit tests for the DAO and Service Layer

- Apply exceptions to allow for "graceful failure"

- Must be able to save if in Production mode and not if in Training mode

- User should be able to Display, Add, Edit, and Remove Orders

The View

- The MCV later that is responsible for interacting with the user.
- Has dependency injection of the UserIO
- Will display a welcome message to the user and a menu of options
- Will handle user input validation of Name, State, Product Type, and Area
- Will have Lists of States and Products passed into it from the controller for validation

The Controller

- The "brain" of the application - tells the other layers what to do
- Has dependency injection of the View and the Service Layer
- Contains the main run( ) method
- Tells the view to display the welcome message and the menu
- Will continue to run while keepGoing = true (while the user choice isn't exit)
- Coordinates the actions of the View and Service Layer - passes information back and forth between them

The Service Layer

- Is an implementation of the Service interface.
- Is the middle man between the Controller and the DAOs.
- Has dependency injection of the DAOs. (Order, State, Product, Mode)
- Does the cost calculations when adding/editing an order
- Determines order number for new Orders
- Searches the DAO for specific Orders
- Has a method to load persisted data into the app
- Facilitates the editing of an Order
- Checks the operating Mode of the application

DTOs

- This application has four Data Transfer Objects:
- Mode - will be the determining factor for user's ability to save
- Product - will be the products available for purchase - contains their name, cost per sq ft, and labor cost per sq ft
- State - the state where the order will be placed - determines the tax rate
- Order - contains all information for the order to be placed - will be saved in persistent storage - separated in files by order date