Object Oriented Lab – Student Grade Manager OO

**For this lab. You will need to work off your existing code. Branch off of your Grade Manager App and make an Object Oriented version of it with the following features.**

**Due Date: TBD**  
  
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We need a console app that manages Classrooms, Students and Assignments.

There needs to be a main menu that manages the total collection of Classrooms.

There needs to be a Classroom Details menu that manages a single Classroom at a time. This includes managing the collection of Students who belong to that Classroom.

There needs to be a Student Details menu that manages a single Student at a time. This includes managing the collection of Assignments which belong to that student.

**For the full set of features, see the files in the “Issues or User Stories” folder**. Each file corresponds to a single feature, and it is laid out in the form of a user story. The file format is Markdown, which is readable as-is, but can also be copied into an issue in GitHub to get the correct formatting.

**For a flowchart showing how the menu options should work in the end, see the Lab2\_GradeManager\_OO\_FlowChart.pdf**.

* You don’t need to match the order of the individual menu options from the flowchart. They were laid out in an order that made the arrows/connections easier to deal with (everything that goes back to the current menu toward the left, anything that opens a new menu toward the right, and exit to previous menu as a separate option to the far right), not necessarily the order they should appear.
* You don’t need to match the wording of the menu options.
* You do need to match the logic and flow.

**Hints:**  
Watch the video over and over again for the details of what this looks like. This WILL require classes if you want to maintain your sanity, this will be exceptionally hard without using the principles of OO. Classrooms have students, students have assignments, assignments have properties on them. I highly suggest you consider a menu system that takes advantage of inheritance.   
  
**Note:**

Student details include:

- Name

- Average Grade

- Indication of whether all assignments are complete (graded)

- Number of assignments

**Note:**

An Assignment needs to have a Grade and some way of determining whether it is complete or not. An Assignment is completed when it is graded.