Gradebook
Executive Summary

Purpose

Gradebook is a simple, easy to use, and helpful computer application for instructors in any educational institution that **need to keep track of students, their grades, and assessments**. If your institution uses *Blackboard Learn* or *Moodle* to manage your courses, but you find it too complicated to use either of the applications, then don't worry because Gradebook can **import students from either Blackboard Learn or Moodle.** Gradebook gives access to graphs that display how the students preformed on a particular assessment so you can make a better, faster, and more accurate judgments when you need to adjust grades. You also have the freedom to **use the Gradebook application on a Macintosh or Windows computer**. Not only can you choose what type of computer to run Gradebook on, but you have the flexibility to decide where to store one single file that contains your entire Gradebook information. One advantage would be for Instructors to store the information file in a cloud service such as Dropbox where the instructor can share the file with their teacher assistances.

Design

The power of Gradebook comes from the easy to use display the Users interact with because it was designed around the Users expectation on how the application should run. It has a Microsoft Excel feel since most Users are aware of its functionality.

- ✓ Gradebook implements the Singleton and Observer patterns which **gives the application an intuitive and smooth feel** as information is inserted, deleted, or updated**.**
- ✓ The application follows the Model-View-Controller (MVC) architecture which **separates the program's logic from the interface display.**
- ✓ This application can easily be **extended and maintained** in an effective and efficient manner since it takes advantage of the Singleton, Observer, and MVC design restricting developers from having to look at the entire project if new features needs to be implemented.

Verification

Currently there exists **unit tests** that thoroughly test how the User's Gradebook information is handled and stored.

- ✓ Unit tests exists for verifying that **inserting, deleting, and updating information is always working** accordingly.
- ✓ Unit tests also exist for verifying that **no relationships between the Users Gradebook information is broken**. An example of such a relationship would be the relationship between a student and their grades for all assessments for a particular course.

Conclusion

Gradebook is an excellent computer application for beginners and advance computer Users who are looking for an application to manage their classes, students, and assessments. The User is given the freedom to run the application on **a Macintosh or Windows computer, maintain their classes** in a simple application, and **display how their students performed on a particular assessment**. The design, look, and feel is very intuitive to the User since most know the basics of Microsoft Excel. Gradebook takes known features from Excel such as its graphing feature but adds the functionality of **allowing the User to create and store multiple courses, import students from *Blackboard Learn* or *Moodle***, and display the students' performance.