For my CS521 Term Project, I created a grade book that a teacher can use to enter student grades. Let’s dig into it! This is the grade\_book.py file where I have written multiple functions that accomplish tasks such as adding students to student.txt, listing students in the student.txt file, adding categories to the category.txt file, listing categories, adding grades to the grade book and displaying grades. At the bottom of the file, I have written a large block of code in a while true loop, that prompts the user to choose different options, which I will demonstrate later. In Student.py there are various attributes such as student\_id, student\_first\_name, etc. that refer to an instance of a Student as well as methods that set and get these attributes. Additionally, the class contains methods that calculate a student’s grade. Running this file should result in the message, “All unit tests passed!”, indicating that all unit tests have completed successfully. Finally, the custom\_error.py file contains various error classes that I created that are used in grade\_book.py for error handling in except blocks.

I will now demo running the program. When I type in 1, all students are listed. When I type in 2, I am able to add a student. We will give this student an ID of 10001, a first\_name of Austin, and a last\_name of Buck. We will then type a 3 to view the categories that we have. We will type a 4 to add a category and enter a category id of 101. We will give it the name quizzes and assign it a weight of .15.

We can then type 5 in, enter the id of the student that we just added 10001. It will give us our selected student as a list of the id, first name and last name. We can then assign the student a grade in the assignment category. We will give the student a grade of .9. We can type y to enter another grade. We will do .85. We can then type n to not enter another grade in the assignments category. We can then enter a grade for the quizzes, we will type in .8. It will ask us if we want to enter in another grade, we will type n for no. We will then see the grades we entered for the student output as well as the final grade.

Finally, we can type 6, to see a list of all student grades in student\_grades\_list.txt.

We can then type 0 to end the program. Thank you for watching.