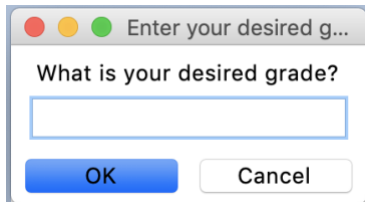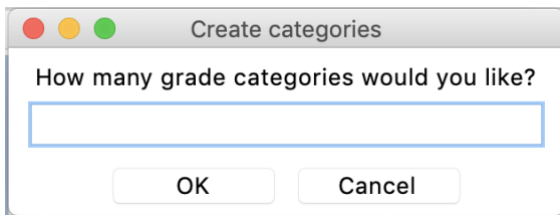# User Manual for Grade Calculator
Developed by Helen White and Jemma Serre

Our program is a grade calculator that allows the user to calculate the average grades for classes as determined by their individual weights and grades. This average grade is then compared against a user given desired average. The comparison is then returned as a message letting the user know what their current average is and whether they are going to meet their projected desired goal. The program also allows the user to input all known weights as well as grades with one missing category to determine the grade needed to achieve that user inputted desired grade. The desired grade along with the necessary grade in the unknown category is returned in a message box.

The requirements for our program are quite simple. The user simply needs Python 3.x.x (as long as it is 3rd generation Python) installed along with the special modules, math and tkinter. Other than these three things, the program is self-contained and will run completely on its own.

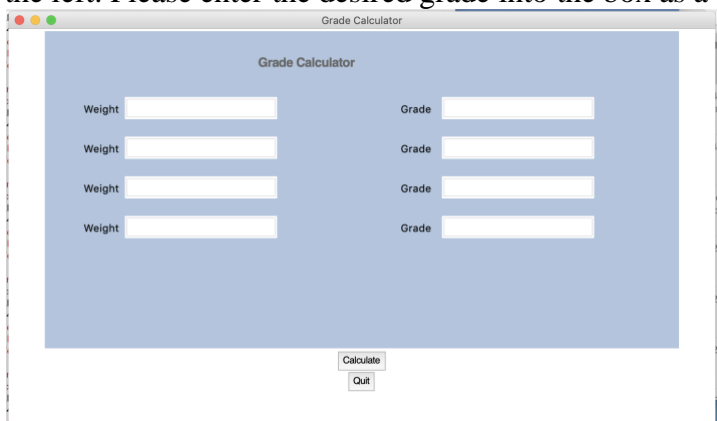Our program is quite user friendly and easy to use, none the less here are the instructions. First, the user must run the module within Python. The program will first pop up a message box that ask for the number of categories like the picture on the right. Please input the number of desired categories for weights and grades into the box. The next step is, the user will be prompted to enter a desired weight like the picture on the left. Please enter the desired grade into the box as a percentage without the percentage sign. The next step is to enter all the weights and grades into the proper boxes as shown to the right. All the grades need to be entered as percentages without the percentage sign. If the user enters a decimal or a percentage with a percentage sign it will return an error message. If the user would like to know if the average grade is comparable to the desired grade, simply fill in all the boxes. If the user would like to know what grade they need in order to achieve a certain grade simply type a U in the last grade box to indicate unknown. When everything is filled in simply click calculate and a message box will pop up indicating either what grade is needed to give the desired grade or will let the user

know what their current average is and what their desired grade is. If the user would like to do a second set of calculations they will have to quit and re-run the program. That's everything.