User's Guide

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Document Version UG004.1

Date: 2018-10-10

<u>Version Control</u>

Document	**Date**	**Action**	**Name**	**Email**
UG001	2018-09-26	Created	John Abueg	j.abueg13@gmail.com
UG002	2018-10-06	Modified	John Abueg	j.abueg13@gmail.com
UG003	2018-10-07	Modified	John Abueg	j.abueg13@gmail.com
UG004	2018-10-09	Modified	John Abueg	j.abueg13@gmail.com
UG004.1	2018-10-09	Revised	John Abueg	j.abueg13@gmail.com
UG004.2	2018-10-10	Revised	John Abueg	j.abueg13@gmail.com
UG004.3	2018-10-12	Revised	John Abueg	j.abueg13@gmail.com

Grade Calculator User's Guide:

1. **Getting Started**

   a. **System Requirements:** To use the Grade Calculator, your system must meet the following minimum requirements:
      - 800MHz Intel Pentium III or equivalent; 512 MB memory; 750 MB of free disk space; Windows 7, Mac equivalent, or newer Operating System; Java SE 7 or Java SE 8.
      - Your computer needs Java installed to run this application. If you do not have Java, go to the following website and download the latest version here: https://www.java.com/en/download

   b. **Installing the Grade Calculator:**
      1. Download the GPA Calculator.jar application. Depending on your browser you may get some type of warning. If you do, choose to keep the file (See figure 1 for an example).
      2. Once it is downloaded and you have Java installed (see **"System Requirements"** if you do not have Java), simply double-click on the application to run it. That's it!

   Figure 2 - File download warning (Google Chrome warning shown)

   c. **Uninstalling the Grade Calculator:** Simply delete the GPA Calculator.jar file.

2. **Grade Calculator Basics**

   a. **What does the calculator do?**

      The calculator takes grade scores and grade weight then derives the following information:

      1. The lowest score (minimum)
      2. The highest score (maximum)
      3. The weighted median (grade weights are considered)
      4. The weighted mean (aka Average, grade weights are considered)
      5. The standard deviation (measures the variation between data points, bigger numbers indicate wider variation in scores)

6. A final letter grade according to the following scale:
    1. A = 90-100
    2. B = 80-89
    3. C = 70-79
    4. D = 60-69
    5. F = Below 60

The calculator also has a "what-if" feature, described further down.

The grades and weight can either be entered manually or loaded from a file (See **"Loading a grade file"**). The grades may be labeled with optional assignment names if you want, and those grades, any names you gave those assignments, and the grade weights can be saved to a file (See **"Saving a grade file."**).

b. **How to use the calculator**

Upon startup, the calculator screen appears. (See figure 2)
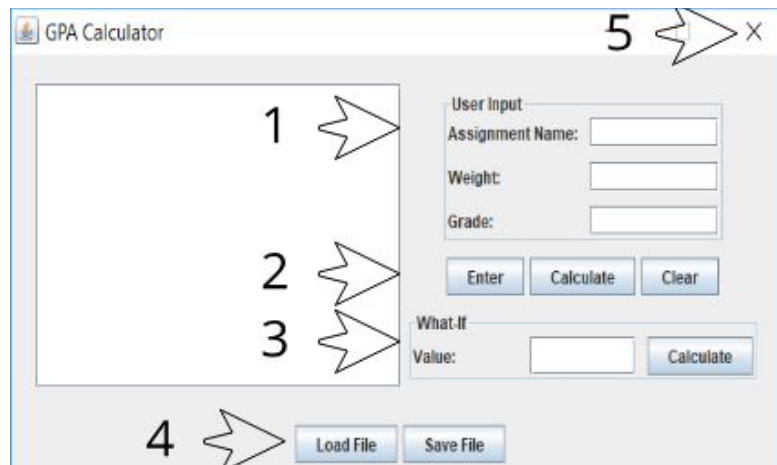
Figure 2 - Initial screen

Let's walk through the different parts of the screen.

1. User Input box: Name individual assignments, its grade, and the assignment's weight. The grade and weight are mandatory fields, while the name is optional.
   The grade and weight fields do accept decimals.

   Note: Names cannot be more than 20 characters long, and must contain letters and/or numbers only.

2. The Enter, Calculate, and Clear buttons

1. Enter Button: Use this to confirm grade input. The assignment information will appear in the window to the left and a new grade can be entered. See figure 3.

Figure 3 - Data entry

2. Calculate Button: Once at least one assignment is confirmed, this button is used to perform the calculations used to find the averages and other information.

   WARNING: Once you've clicked the "Calculate" button, further grades you input are NOT added to the calculated grades. To work with the calculated grades, please save them to a file first then load them!
   This applies to BOTH Calculate buttons.

3. Clear Button: This button will clear all manually-entered information. *Make sure to save any entered grades first if you want to work with them later!*

3. "What-if" box: See **" 'What-if' function."**

4. The Load File/ Save File buttons
   1. Load File: Used to load a saved grade file. See **"Loading a grade file."**
   2. Save File: Used to save current grades, weight, and assignment names into a grade file. See **"Saving a grade file."**

5. The X: Close the program by clicking on the X. *Make sure to save any entered grades first if you want to work with them later!*

See figure 4 for an example of the calculator's basic functions in use.

Figure 4 - Calculator in action

c. **"What-if" function**

The "What-if" function allows you to take the current entered scores and see what assignment score from 0-100 it would take to reach a target grade you specify! (Alternatively, you could use it to find the lowest grade you could get and still achieve a minimum final score.) All "what-if" scores are calculated with the **lowest** grade weight possible in order to emphasize reaching your target as quickly as possible.

To use it:
1. Enter all the grades, weight, and optional names in the User Input box as you normally would.
2. After all grades are entered, put your target score in the What-If box's Value field.
3. Click the "Calculate" button in the What-If box. You will get the same results as you would with the calculator's basic function plus two more values: The "what-if" score needed to reach your target, and the weight of that score. See figure 5.

   WARNING: Once you've clicked the "Calculate" button, further grades you input are NOT added to the calculated grades. To work with the calculated grades, please save to a file first then load them! This applies to BOTH Calculate buttons.
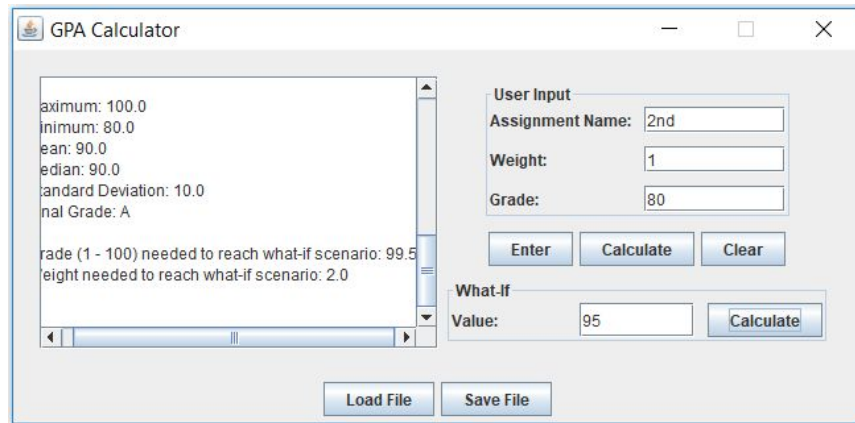
Figure 5 - What-if Values

d. Saving a grade file

Your current entered grades, grade names, and grade weight can be saved in a file for future usage. To save:

1. Click the Save File button.
2. A pop-up window appears where you can choose the directory and specify a filename. (Note: Filenames cannot be more than 20 characters long, and must contain letters and/or numbers only.) ***The file will automatically be given the .dat extension, please do not enter an extension manually.***
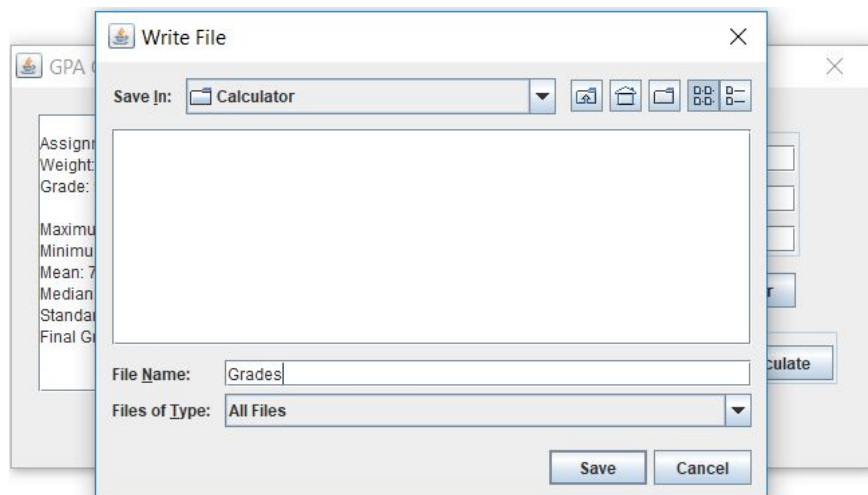3. Once the directory and filename are entered, click the Save button. See figure 6.

Figure 6 - Save Screen

e. Loading a grade file

As stated above, grade files are saved with the .dat extension. Attempting to load a file without this extension is not allowed.

1. Click the Load File button.
2. Choose the appropriate file from the pop-up window and click the Open button. See figure 7.
3. Once the file is loaded, the saved information is calculated. However, you are able to enter more grades and add them to the loaded ones!
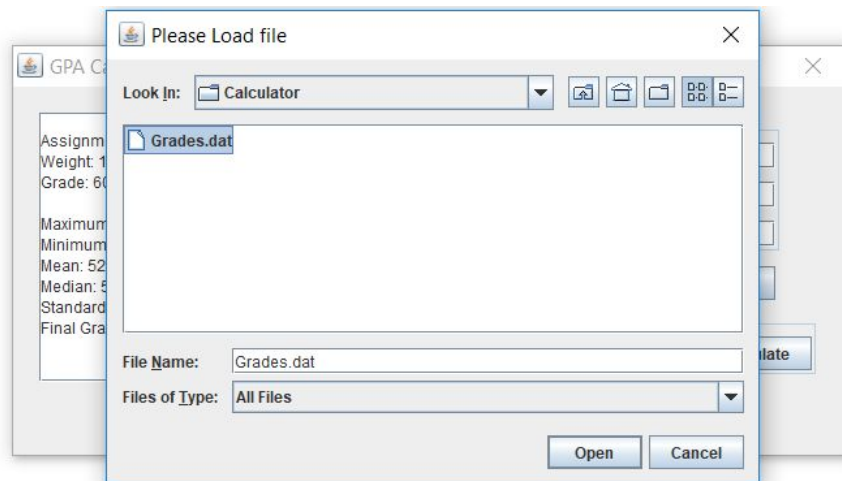

Figure 7 - Load Screen