# Homework 7

Please read <https://github.com/ying-teaching/python/blob/master/0-installation-setup/git-and-github.md> for detail instructions to setup your development tools, create a Github account, and how to push your code to GitHub repository.

## The Submission

## The detail requirements are given in the next section. Once you complete it, please create a one-line text file (a file with “.txt” postfix) that a link to your GitHub homework repository. It is recommended to use a repository name that is the same as your homework. Please submit the text file to the BeachBoard dropbox.

## For example, below is the sample content of your hw.txt (the link is a sample link, please change it to your GitHub repository) for homeworkx (x is the homework number such as 1, 2 ,3…)

<https://github.com/your-github-name/homeworkx.git>

## Wrong file format, invalid URL, or un-working file is in-completed and gets 0 point.

## The Tasks

## Create a folder “homework7” as your project workspace. It is the root folder of your homework project. It has two files for the following two tasks.

### “task1.py” file

Use random module with a seed of 2020 to generate 20 integers between 100 and 120 (inclusive). Then write code to calculate the median and mode. The median is the 10th largest number. The mode is the number that occurs the most. If two or more number have the same frequency, list them all.

### “task2.py” file

The “scores.csv” is a csv file exported from an Excel file. It has the scores for each student in three courses. It has the following content:

,Adrian Alice,Alexis Bruce,Braxton Conley,Bruce Lee,Cindy Kim

IS101,87,100,94,100,83

IS102,96,87,77,81,65

IS103,70,90,90,82,85

Use the *DataFrame* of Python’s *pandas* package to calculate and print the required output.

Calculate the grade for each student according to the following rules:

>= 90 A >= 80 B >= 70 C >= 60 D <60 F

Calculate the class GPA with two decimal places according to the following rule:

A 4.00, B 3.00, C 2.00, D 1.00, F 0.00

Print the GPA for each student and the whole class:

*Adrian Alice 3.21*

*Alexis Bruce 2.74*

*Braxton Conley 2.32*

*…*

*The class GPA is 2.62*