

CS 301 HW 05

Total possible score: 20 points

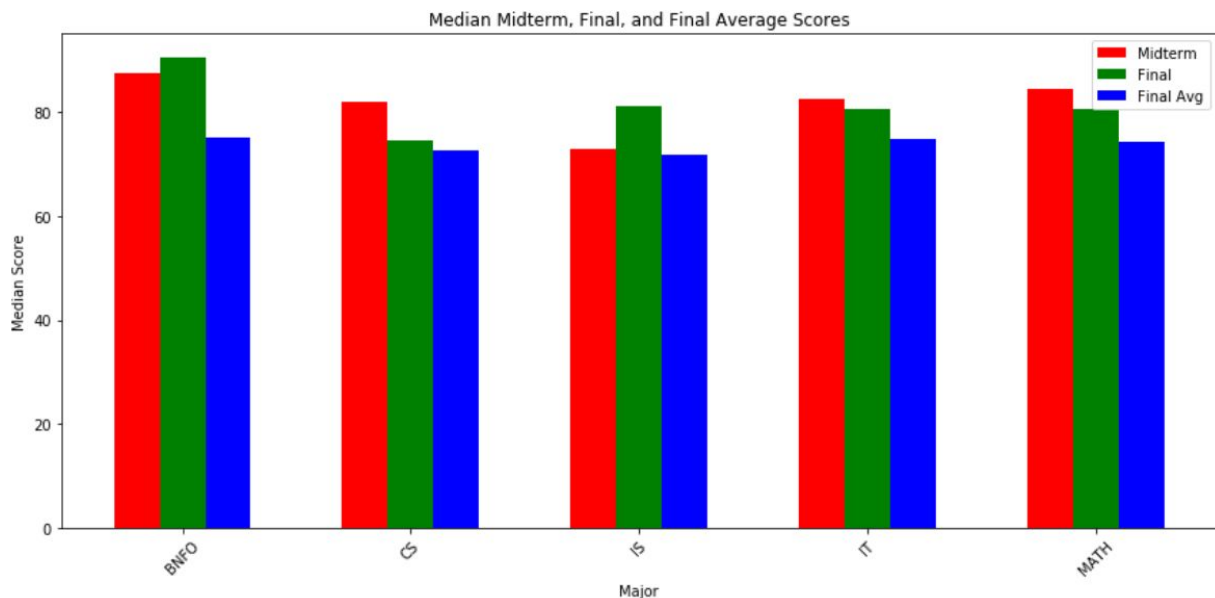
NOTE: Your submission must be in a .ipynb (Jupyter Notebook) file, **and** you must upload it **publicly** to your GitHub account, **and** it must include the following comments in the first cell:

```
# Author: Firstname (Middlename) Lastname
# Date: YYYYMMDD
# CS301-006, Professor Watson
# HW## Solution
# Brief description of the assignment / project / work that is done
# Link to the git repo (ex: https://github.com/cww5/web_scraper)
# Link-to-the-relevant-git-commit (ex: https://github.com/cww5/web_scraper/tree/60e907c00ecbe21bc6a543621c9683ebf7f9693a)
# name-of-the-branch (ex: master)
```

For this homework, you **must** use the data set found on Canvas titled, “student_class.csv”. Use python/matplotlib code to generate the plots you see. Also, use print() function calls or markdown cells to answer the questions you see with each problem.

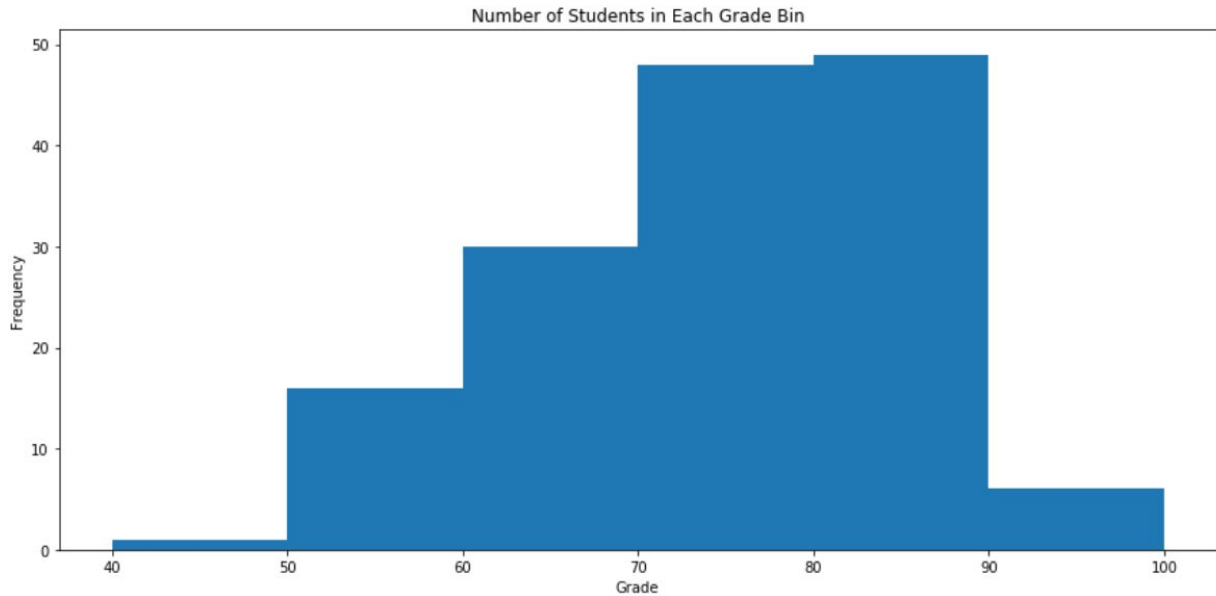
Problem 1) (5 points total)

Use a [bar chart](#) to display the median of the Midterm, Final, and Final Average columns, per major. Identify the data items, attributes, and the marks and channels used. Comment on the overall performance of each major...Which major(s) appear to be doing the best? Why do you think so? It should look like:



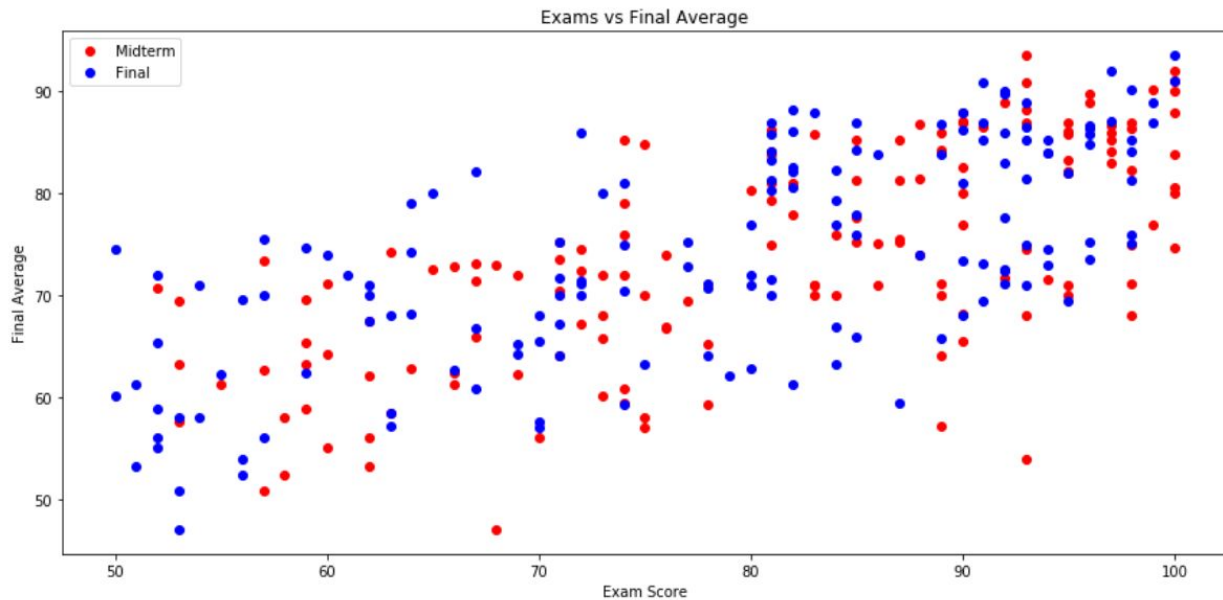
Problem 2) (5 points total)

Use a [histogram](#) to plot the number of students in each grade bin. [40, 50), [50, 60),...etc. Identify the data items, attributes, and the marks and channels used. Critique the chart below. Is there anything you would change? Is there anything you would improve? Also comment on the distribution (approximately normal, skewed, etc). It should look like:



Problem 3) (5 points total)

Use a scatter plot to see the exam scores versus the final average. You should see the Midterm and Final on the x-axis, and the Final Average on the y-axis. Identify the data items, attributes, and the marks and channels used. Based on this chart, can you tell if the exam scores are indicative of the corresponding Final Average? Why or why not? It should look like:



Problem 4) (5 points for completing the survey)

Please complete the weekly survey available [here](#).

This is the link: <https://forms.gle/sS76YiGEnxWAoCMP9>

This survey is for you to submit your opinions about the topics covered each week. It is also feedback that I will use to improve the course moving forward.