Homework 5

30 points
Due Monday, March 18 at 11:59 PM

The following datasets contain enrollment data from a fictional college for the Fall 2015/Spring 2016 academic year:

- https://raw.githubusercontent.com/CUNY-CISC-3225/datasets/main/college/students.csv: A listing of students and their ID.

- https://raw.githubusercontent.com/CUNY-CISC-3225/datasets/main/college/careers.csv: A listing of student IDs and the career that student went on to have.

- https://raw.githubusercontent.com/CUNY-CISC-3225/datasets/main/college/clubs.csv: A listing of clubs that students belong to.

- https://raw.githubusercontent.com/CUNY-CISC-3225/datasets/main/college/courses.csv: A listing of course numbers and names (scraped from the Brooklyn College website)

- https://raw.githubusercontent.com/CUNY-CISC-3225/datasets/main/college/f15.csv: Enrollment data from Fall 2015.

- https://raw.githubusercontent.com/CUNY-CISC-3225/datasets/main/college/s16.csv: Enrollment data from Spring 2016.

Using a combination of Pandas features, including concatenation, merging, and grouping, answer the following questions. Avoid using loops.

1. Use merging to produce a DataFrame showing which students belong to which clubs.

2. In Question 1, did you perform a one-to-one, many-to-one, or many-to-many merge? Why?

3. Are there any students who are not in any clubs? If so, how many? Show their names and student ID.

4. Use merging to produce a DataFrame showing the names of courses that students enrolled in.

5. In Question 4, did you perform a one-to-one, many-to-one, or many-to-many merge? Why?

6. Ignoring withdrawals, for the whole F15/S16 academic year, what is the name of the course that is probably the hardest? Which is probably the easiest?

7. Did any students not enroll in any course during the whole F15/S16 academic year? Who?

8. What is the name of the student who scored the the most cumulative points in the whole F15/S16 academic year?

9. Over the whole F15/S16 academic year, what career was most common among students taking 1215?

10. List the names of students who went into manufacturing.

Submission Instructions

In Blackboard, submit written responses in an appropriate text format (PDF, Word, LibreOffice, etc) and your *.ipynb file(s). Do not submit a share link.