HW7

36-650 – Statistical Computing

Deadline: December 3rd, 11:59PM EST

- You must submit your HW solution as series of python files and screenshots showing the results for running your code.
- Your GitHub repository should contain a folder named HW-7. Inside this folder, there should be a folder for each question.
- On GitHub, check-in the answer for each question in a separate python file in the corresponding folder.
- Each python file may include one or more python functions. Each function SHOULD NOT exceed 15 lines of code (excluding comments).
- For each question, submit a screenshot for the result of running your code.
- Make sure your GitHub repository is publicly viewable.
- On Canvas, only submit a URL to your GitHub repository.
- Plan to get the needed assistance from instructor or TA by Friday. Expect no assistance over the weekend.
- Not following the submission guidelines may result in grading penalties.

Question 1 (30 points)

Check the queue.py file that is attached with this assignment on Canvas.

Conduct the following:

- Develop 5 different test cases
    - Write 3 test cases (using assert) for happy path scenario.
    - Write 2 test cases for edge cases
    - Write all your test cases in a separate file.
- Generate the code coverage for the tests (Don't include any driver code used to run the functions)
- Does this code generate exceptions under any circumstance?
    - Hint: Check the code's ability to dequeue from empty list.

- If you find the code to be generating an exception, handle it properly by catching the exception, printing it on the screen, and returning **None**.

Question 2 (60 points)

Check the remove_dups_linked_list.py file that is attached with this assignment on Canvas.

Conduct the following:

- Develop 10 different test cases
  - Write 5 test cases (one for each function) for happy path scenarios in both classes (covering all functions in both classes except __init__() functions).
  - Write 5 test cases for edge cases. Include one test cases to handle the ValueError() exception raised by print_list() function and check it is happening.
  - Write all your test cases in a separate file.
- Generate the code coverage for the tests (Don't include any driver code used to run the functions)
  - Aim for 90%+ code coverage. Add any additional tests to increase the coverage as needed.

Common Penalties:

- Your GitHub repository is not public: 100% reduction (won't be graded)
- Late submissions on Canvas or GitHub: 100% reduction (won't be graded)