Cruise Ship Exercise

# Instructions

This exercise should be performed in python, with numpy and pandas. You are free to use the internet and any other libraries. Please save your work in a Jupyter notebook and email it to me for review. For every answer please provide justification and visual data. Remember to work as a group as necessary.

Data file: cruise\_ship\_info.csv (this file will be in the iLearn Social Community)

Objective: Build a chart, or multiple charts, using python to support answering the following questions:

1. What ship would you recommend for potential ship buyers that have: what is definition of large, medium, and small? Any range?
   1. Large Crew Size
   2. Medium Crew Size
   3. Small Crew Size
2. What Cruise Line would you recommend for potential buyers that have:
   1. Highest Number of Ships
   2. Largest Crew
   3. Largest Crew Size per Ship
3. What ship has the highest crew to passenger ratio?
4. What Cruise Line has the highest crew to passenger ratio?
5. Which ship has the highest average tonnage?
6. What ship would be the best choice if I were going to start a new Cruise Line that travels to the best vacation spots in the Caribbean with a large number of passengers?
7. What Cruise Line would you recommend to travel on?

# Helpful Information

I like to use W3Schools a lot. For this exercise, you might find the following link helpful:

<https://www.w3schools.com/python/pandas/default.asp>

There are tutorials here and quick references for things related to Pandas here. Including correlations and plotting options. And you can see and test small pieces of code. You may also want to explore the Matplotlib from here.

# Printing and sending results

There are multiple options to do this, and I have not explored all of them. After writing and executing the code in the Jupyter IDE, I was able to do a Print Preview and then print that to the ‘Microsoft Print to PDF’ Printer. So, that is one option. You can also do screen shots using the snipping tool, or anything else that feels best to you. I mainly want to see your code, the plots that give you the data to analyze, and how you support the answers you come up with for the questions above.

Here is an example of correlation outputs from other data, but you may use other plots depending on the answers you are looking for.

