#NYC Parking Ticket Analysis for 2017 Fiscal Year
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Project Tools:
The tools used to build this program were:

1. Python
2. Pandas
3. Seaborn
4. Matplotlib

Project Planning
The motivation for this project is to help create an understanding of what factors contribute to parking tickets and will help to determine trends to inform the community about things to keep in mind when parking.

Description of the issues or opportunities the project will address:
Approximately 10 million tickets are issued in NYC per year. This fact alone proves that NYC is one of the most difficult cities to find parking without being penalized. NYC drivers can end up receiving a fine for parking issues including expired muni meter parking, double parking, parking past regulation hours, etc. This is the result of people being unaware of the city parking rules bringing New Yorkers to receive parking tickets for the same violation more than once.

###Program Instructions
The source code will first clean the data and provide an overall summary about FY'17 NYC parking ticket data through questions below:

- ❑ How many tickets were given during FY'17?
- ❑ How many tickets were issued during each month in FY'17?
- ❑ What are the top 3 months with the highest number of tickets?
- ❑ What day of the week receives the most tickets?
- ❑ Which county received the most tickets during FY'17?
- ❑ What are the most common parking violations in FY'17?
- ❑ What are the most common years and types of cars to be ticketed in FY'17?
- ❑ Which cars (in-state or out-of-state) are more likely to violate rules?
- ❑ Which plate type are the most involved with parking violations in FY'17?
- ❑ Which car received the most tickets and for what parking violation?

###Interactive Analysis

- ❑ What season are tickets most likely to be given?
  This step displays a summary of automobile violations by season and has two input() functions. Firstly, input asks for the user's choice ("y"/"n"). Based on the user's answer, related information will be shown. If the user answers "y", another input will be executed with a request to input one of the options ("Spring, Summer, Fall, or Winter"). After the user inputs their answer, the function (get_result) will be invoked and the desired information will be printed on the screen. If the user answers "n", the print statement will show a message ("You can check that information later.").
- ❑ How many tickets were given during a specific month?
  This step shows monthly analysis on the number of NYC parking tickets in the beginning and it requires the user input value to

show a specific value for the input. The user is supposed to choose one of the months (1~12) to get the result.

- ❏ What month in a specific borough brings in the highest and lowest number of tickets? What is the average number of tickets given in a month for this specific borough?

  This step allows the user to find key facts about a specific borough showcasing the highest and lowest number of tickets of all months in the fiscal year along with the average number of tickets in a month in a specific borough. The user will insert the name of the Borough (Brooklyn, Manhattan, Bronx, Staten Island, Queens) and the code will prompt the user if we want to use the code once again "y"/ "n".

- ❏ What is the number of tickets for a specific registration state?

  This step shows the number of tickets for any registration state when the user inputs any state abbreviation. This shows the number of tickets for that specific registration state. Ex: input CT, NY, NJ and the number of tickets shows up. You can input as many states as you want by inputting 'y'. When you are finished, input 'n'.

###Analysis & Results

- ❏ June is the month that most parking tickets were issued and most tickets were given on a weekday.
- ❏ Manhattan is the borough that has issued the most parking tickets.
- ❏ Violation code (21) issued the most amount of tickets, the 'Blue Zone' violation code (57) issued the least amount of tickets.
- ❏ 2015 Toyota is the vehicle make/year with the most amount of tickets issued.
- ❏ In-state cars (NY) are most likely to violate rules than out-of-state drivers.
- ❏ The double parking violation code (46) is violated the most by the same person.
- ❏ PAS plates (passenger vehicles) are the most common plate types to receive tickets compared to the other plate types.

Data Sources:

https://www.kaggle.com/new-york-city/nyc-parking-tickets

Project:
https://github.com/kevinim/CIS9650python21.git

References:
https://www.nbcnewyork.com/news/local/parking-tickets-new-york-city-worst-best-neighborhoods-renthop-cost-millions/414676/