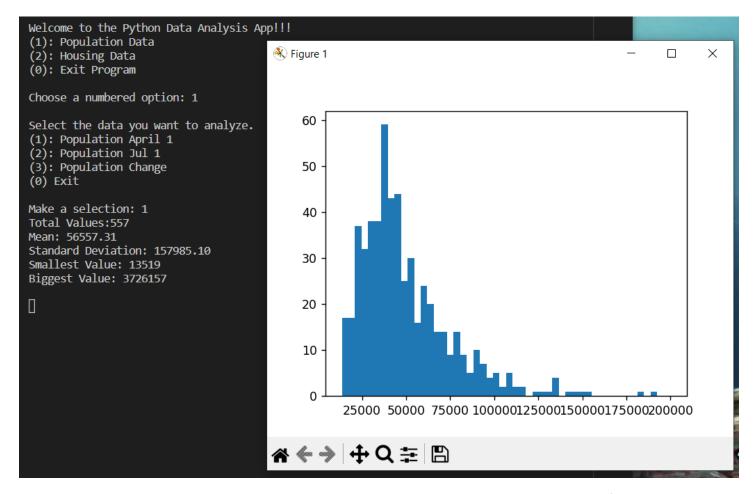
Name: Rodriguez, Michael SDEV300 Date: (11/21/2022)

PS C:\Users\MHR1440\Documents\impo\UMGC\SDEV300\Week5> pylint c:/Users/MHR1440 /Documents/impo/UMGC/SDEV300/Week5/RodriguezMichaelLab5.py
has been rated at 10.00/10 (previous run: 10.00/10, +0.00) PS C:\Users\MHR1440\Documents\impo\UMGC\SDEV300\Week5>

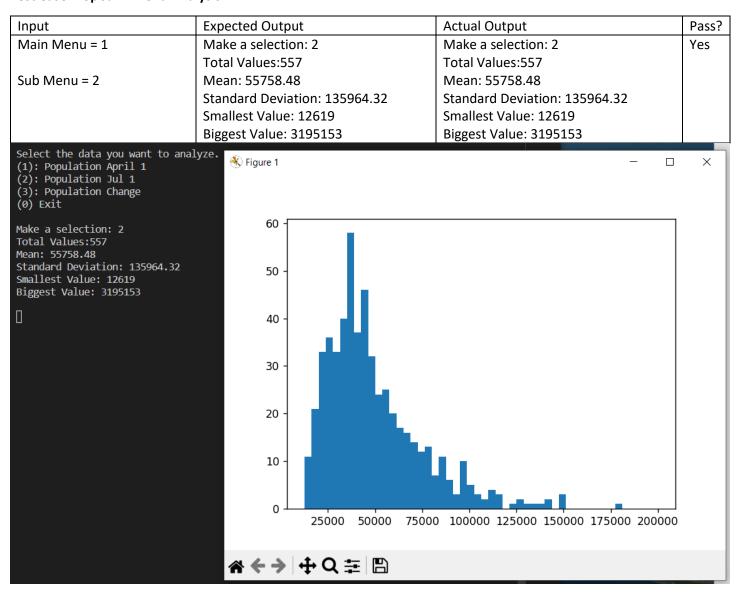
Test Case: Pop Apr 1 Menu Analysis

Input	Expected Output	Actual Output	Pass?
Main Menu = 1	Welcome to the Python Data Analysis	Welcome to the Python Data Analysis	Yes
	App!!!	App!!!	
Sub Menu = 1	(1): Population Data	(1): Population Data	
	(2): Housing Data	(2): Housing Data	
	(0): Exit Program	(0): Exit Program	
	Choose a numbered option: 1	Choose a numbered option: 1	
	Select the data you want to analyze.	Select the data you want to analyze.	
	(1): Population April 1	(1): Population April 1	
	(2): Population Jul 1	(2): Population Jul 1	
	(3): Population Change	(3): Population Change	
	(0) Exit	(0) Exit	
	Make a selection: 1	Make a selection: 1	
	Total Values:557	Total Values:557	
	Mean: 56557.31	Mean: 56557.31	
	Standard Deviation: 157985.10	Standard Deviation: 157985.10	
	Smallest Value: 13519	Smallest Value: 13519	
	Biggest Value: 3726157	Biggest Value: 3726157	



Notes: The Population csv had an extreme outlier that made it hard to graph properly. I eventually found the range key word to truncate the extreme value for the histogram. The extreme data is still kept for the final metrics of standard deviation and the biggest value. Menu and sub menu output will be omitted in future cases for brevity. The histogram uses fifty bars of data for accuracy in comparison to the 19 seen in the lab document.

Test Case: Pop Jul 1 Menu Analysis



Notes: The Jul 1 data also has an extreme outlier that is truncated for the histogram only.

Test Case: Population Change Menu Analysis

Input	Expected Output	Actual Output	Pass?	
Main Menu = 1	Make a selection: 3	Make a selection: 3	Yes	
	Total Values:557	Total Values:557		
Sub Menu = 3, 0	Mean: -798.83	Mean: -798.83		
	Standard Deviation: 22690.96	Standard Deviation: 22690.96		
	Smallest Value: -531004 Smallest Value: -531004			
	Biggest Value: 22363	Biggest Value: 22363		
Mean: 55758.48 Standard Deviation: 135964.32 Smallest Value: 12619 Biggest Value: 3195153			- 0	
Select the data you want to a (1): Population April 1 (2): Population Jul 1 (3): Population Change (0) Exit	100 -			
Make a selection: 3 Total Values:557 Mean: -798.83 Standard Deviation: 22690.96 Smallest Value: -531004 Biggest Value: 22363	80 - 60 -			
	40 -			
	20 -			
	0 -15000 -10000 -	5000 0 5000 10000 15000 2	0000 25000	

Notes: The data for this histogram had extreme ranges on both ends of the x-axis. This required a different range to show properly.

Test Case: Age Menu Analysis

Input	Expected Output		Actual Out	put	Pass?
Main Menu = 2	Make a selection: 1		Make a sel	ection: 1	Yes
	Total Values:10042		Total Value	es:10042	
Sub Menu = 1	Mean: 47.22		Mean: 47.2	22	
	Standard Deviation:	23.15	Standard D	eviation: 23.15	
	Smallest Value: -9		Smallest Va	alue: -9	
	Biggest Value: 93		Biggest Val	ue: 93	
Welcome to the Python Data A (1): Population Data (2): Housing Data (0): Exit Program	nalysis App!!!				
Choose a numbered option: 2	2000 -				
Welcome to the Python Data A (1): Age (2): Bedrooms (3): Built	nalysis App!!! 1750 -				
<pre>(4): Rooms (5): Utility (0): Exit</pre>	1500 -				
Make a selection: 1 Total Values:10042 Mean: 47.22	1250 -				
Standard Deviation: 23.15 Smallest Value: -9 Biggest Value: 93	1000 -				
I I I I I I I I I I I I I I I I I I I	750 -				
	500 -				
	250 -				
	0 -	0	20	40 60	80

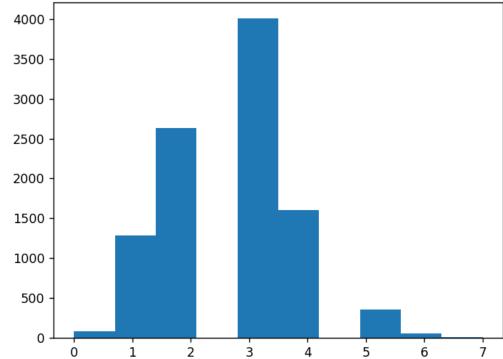
Notes: The housing data does not have any extreme outliers. The default histogram

Test Case: Bedroom Amount Menu Analysis

Input	Expected Output	Actual Output	Pass?
Main Menu = 2	Make a selection: 2	Make a selection: 2	Yes
	Total Values:10042	Total Values:10042	
Sub Menu = 2	Mean: 2.71	Mean: 2.71	
	Standard Deviation: 1.07	Standard Deviation: 1.07	
	Smallest Value: 0	Smallest Value: 0	
	Biggest Value: 7	Biggest Value: 7	
Make a selection: 2	1000		

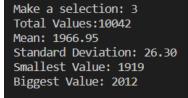
Total Values:10042 Mean: 2.71 Standard Deviation: 1.07 Smallest Value: 0 Biggest Value: 7

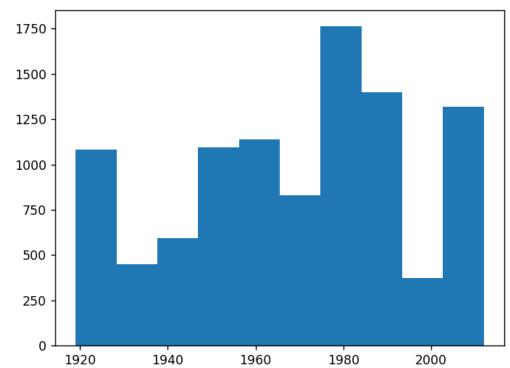




Test Case: Build Year Menu Analysis

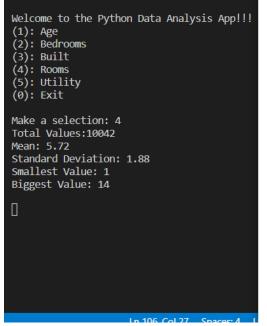
Input	Expected Output	Actual Output	Pass?
Main Menu = 2	Make a selection: 3	Make a selection: 3	Yes
	Total Values:10042	Total Values:10042	
Sub Menu = 3	Mean: 1966.95	Mean: 1966.95	
	Standard Deviation: 26.30	Standard Deviation: 26.30	
	Smallest Value: 1919	Smallest Value: 1919	
	Biggest Value: 2012	Biggest Value: 2012	

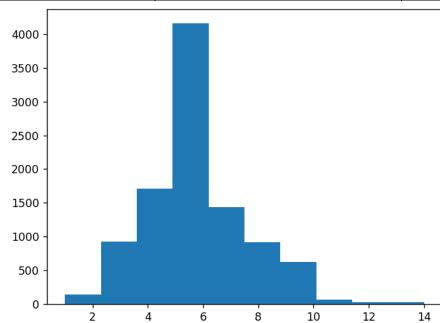




Test Case: Room Amount Menu Analysis

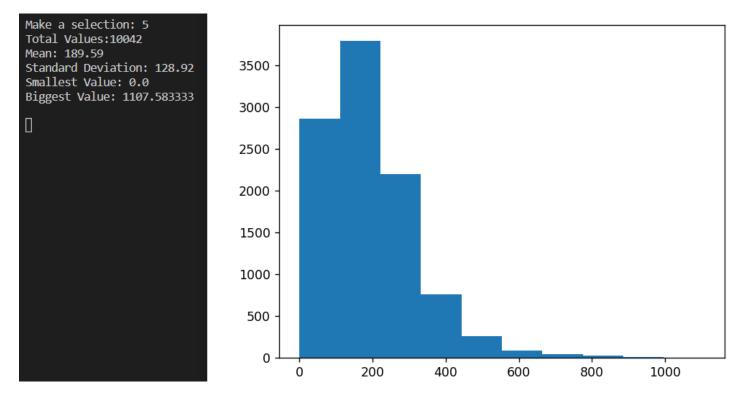
Input	Expected Output	Actual Output	Pass?
Main Menu = 2	Make a selection: 4	Make a selection: 4	Yes
	Total Values:10042	Total Values:10042	
Sub Menu = 4	Mean: 5.72	Mean: 5.72	
	Standard Deviation: 1.88	Standard Deviation: 1.88	
	Smallest Value: 1	Smallest Value: 1	
	Biggest Value: 14	Biggest Value: 14	





Test Case: Utility Menu Analysis

Input	Expected Output	Actual Output	Pass?
Main Menu = 2	Make a selection: 5	Make a selection: 5	Yes
	Total Values:10042	Total Values:10042	
Sub Menu = 5, a, 0, 0	Mean: 189.59	Mean: 189.59	
	Standard Deviation: 128.92	Standard Deviation: 128.92	
	Smallest Value: 0.0	Smallest Value: 0.0	
	Biggest Value: 1107.583333	Biggest Value: 1107.583333	
	Welcome to the Python Data Analysis	Welcome to the Python Data Analysis	
	App!!!	App!!!	
	(1): Age	(1): Age	
	(2): Bedrooms	(2): Bedrooms	
	(3): Built	(3): Built	
	(4): Rooms	(4): Rooms	
	(5): Utility	(5): Utility	
	(0): Exit	(0): Exit	
	Make a selection: a	Make a selection: a	
	Invalid input. Please try again.	Invalid input. Please try again.	
	Welcome to the Python Data Analysis	Welcome to the Python Data Analysis	
	App!!!	App!!!	
	(1): Age	(1): Age	
	(2): Bedrooms	(2): Bedrooms	
	(3): Built	(3): Built	
	(4): Rooms	(4): Rooms	
	(5): Utility	(5): Utility	
	(0): Exit	(0): Exit	
	Make a selection: 0	Make a selection: 0	
	Exiting population analysis	Exiting population analysis	
	Welcome to the Python Data Analysis	Welcome to the Python Data Analysis	
	App!!!	App!!!	
	(1): Population Data	(1): Population Data	
	(2): Housing Data	(2): Housing Data	
	(0): Exit Program	(0): Exit Program	
	Choose a numbered option: 0	Choose a numbered option: 0	
	Thanks for using the data analysis	Thanks for using the data analysis app!	
	app!		



Notes: An a was inputted to verify error checking. The application requires specific input and treats every other input as an error.