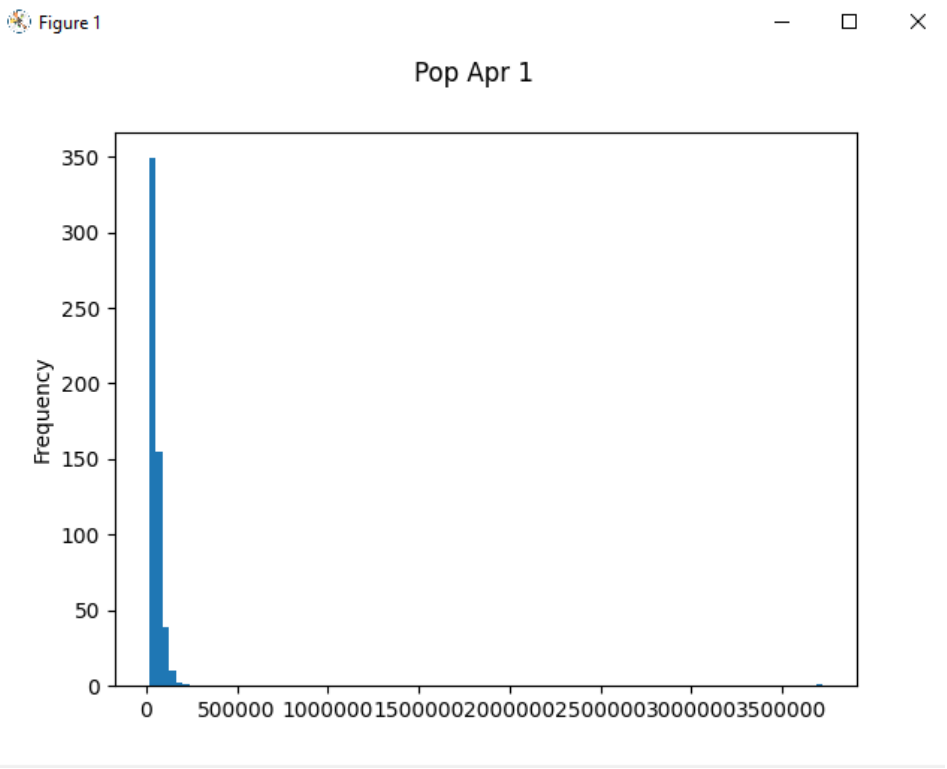
Test case #1. Shows how invalid input is handled and the successful test of population file, Pop Apr 1 column.

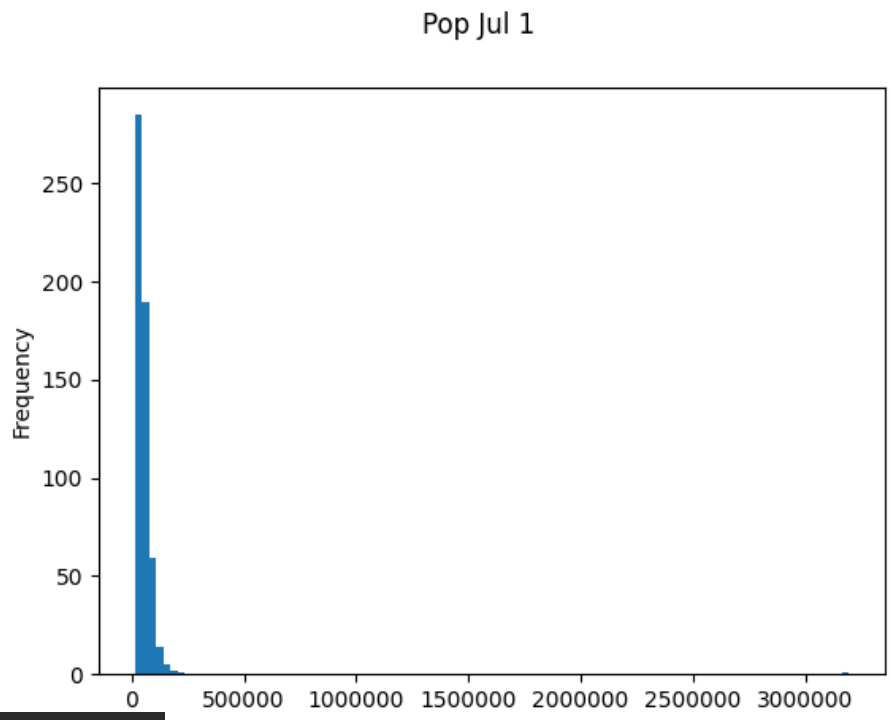
```
Welcome to the program!
Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
one
Please select a valid option (1-3): 4
Please select a valid option (1-3): 1
You have entered population data.
Select the Column you want to analyze:
a. Pop Apr 1
b. Pop Jul 1
c. Change Pop
d. Exit population data
ay
Please select a valid option (a, b, c, or d): 1
Please select a valid option (a, b, c, or d): a
You selected Pop Apr 1
Count: 557
Mean: 56,557.31
Min: 13,519
Max: 3,726,157
Standard Deviation: 158,127.11
The Histogram of this column is now displayed.
```




```
Select the Column you want to analyze:
a. Pop Apr 1
b. Pop Jul 1
c. Change Pop
d. Exit population data
d
You selected to exit population data

Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
3
Thank you for using the program, have a nice day!

Process finished with exit code 0
```

Test case #2. Shows successful test of population file, Pop Jul 1 column

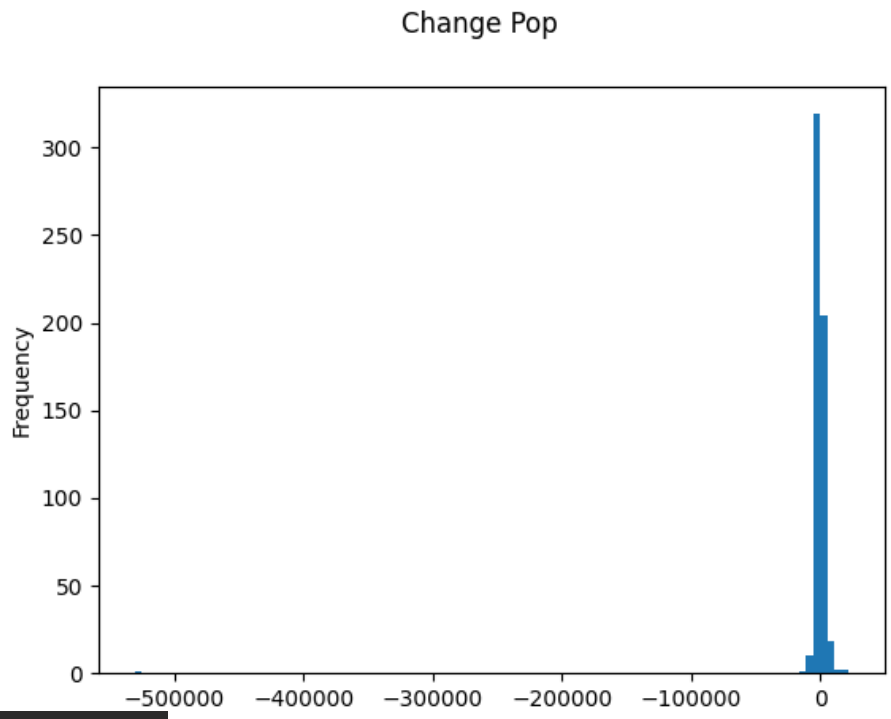
```
Welcome to the program!
Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
1
You have entered population data.
Select the Column you want to analyze:
a. Pop Apr 1
b. Pop Jul 1
c. Change Pop
d. Exit population data
b
You selected Pop Jul 1
Count: 557
Mean: 55,758.48
Min: 12,619
Max: 3,195,153
Standard Deviation: 136,086.53
The Histogram of this column is now displayed.
```




```
Select the Column you want to analyze:
a. Pop Apr 1
b. Pop Jul 1
c. Change Pop
d. Exit population data
d
You selected to exit population data

Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
3
Thank you for using the program, have a nice day!

Process finished with exit code 0
```

Test case #3. Shows successful test of population file, Change Pop column

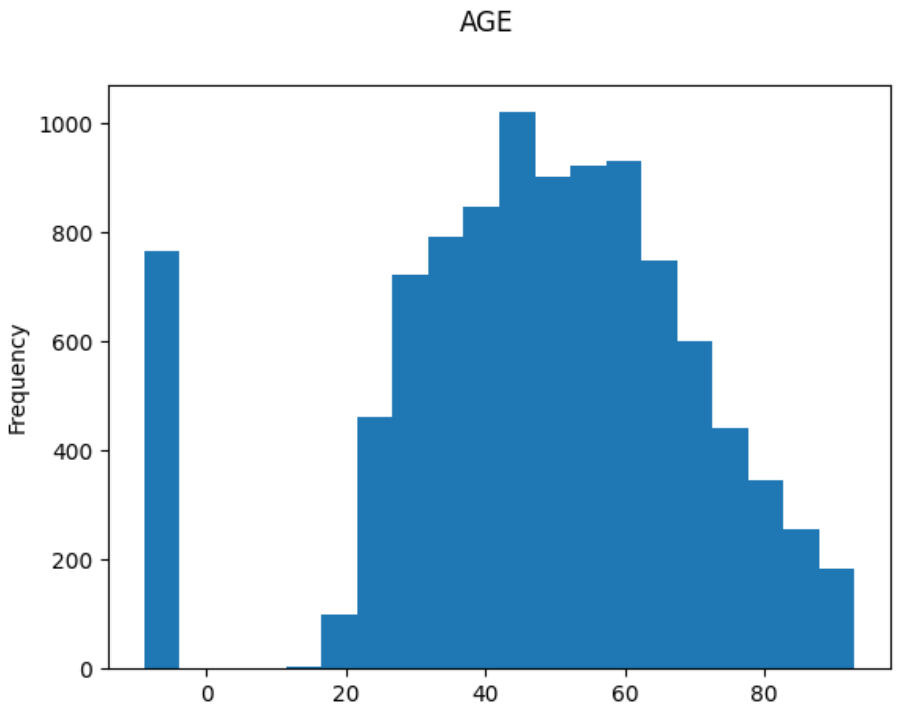
```
Welcome to the program!
Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
1
You have entered population data.
Select the Column you want to analyze:
a. Pop Apr 1
b. Pop Jul 1
c. Change Pop
d. Exit population data
c
You selected Change Pop
Count: 557
Mean: -798.83
Min: -531,004
Max: 22,363
Standard Deviation: 22,711.35
The Histogram of this column is now displayed.
```




```
Select the Column you want to analyze:
a. Pop Apr 1
b. Pop Jul 1
c. Change Pop
d. Exit population data
d
You selected to exit population data

Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
3
Thank you for using the program, have a nice day!

Process finished with exit code 0
```

Test case #4. Shows how invalid housing input is handled and the successful test of housing file, AGE column

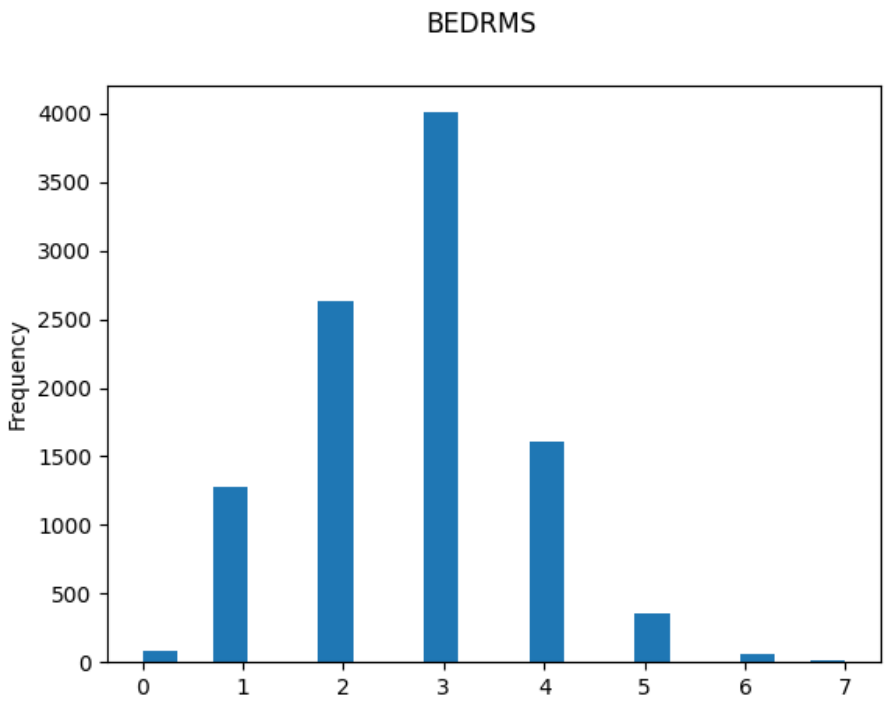
```
Welcome to the program!
Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
2
You have entered Housing Data.

Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
a
You selected AGE
Count: 10,042
Mean: 47.22
Min: -9
Max: 93
Standard Deviation: 23.15
The Histogram of this column is now displayed.
```




```
Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
1
Please select a valid option (a, b, c, d, e, or f): z
Please select a valid option (a, b, c, d, e, or f): f
You selected to exit housing data

Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
3
Thank you for using the program, have a nice day!

Process finished with exit code 0
```

Test case #5. Shows successful test of housing file, BDRMS column

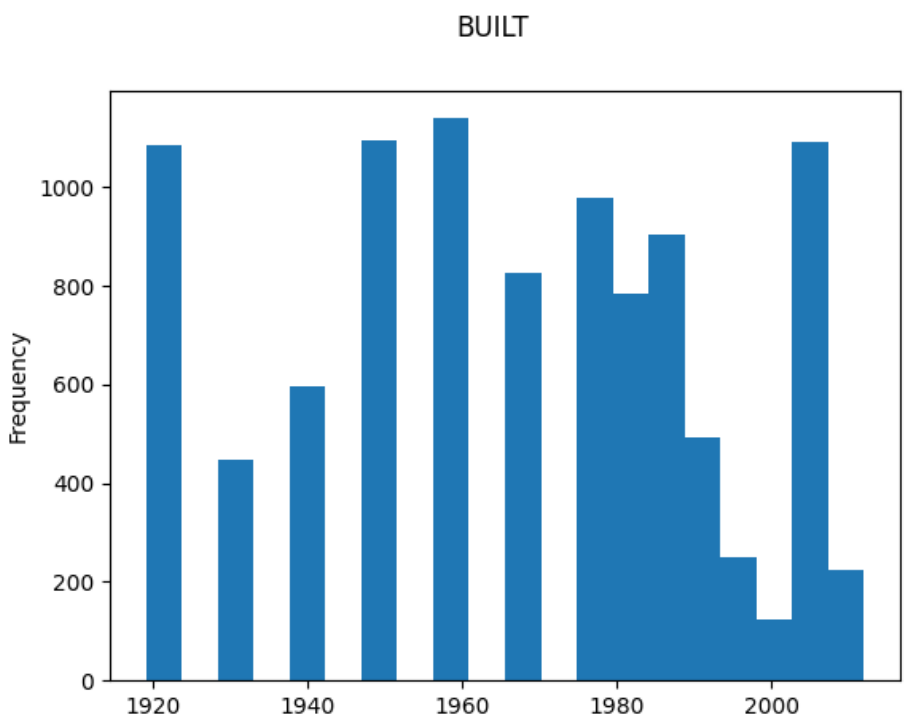
```
Welcome to the program!
Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
2
You have entered Housing Data.

Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
b
You selected BEDRMS
Count: 10,042
Mean: 2.71
Min: 0
Max: 7
Standard Deviation: 1.07
The Histogram of this column is now displayed.
```




```
Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
f
You selected to exit housing data

Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
3
Thank you for using the program, have a nice day!

Process finished with exit code 0
```

Test case #6. Shows successful test of housing file, BUILT column

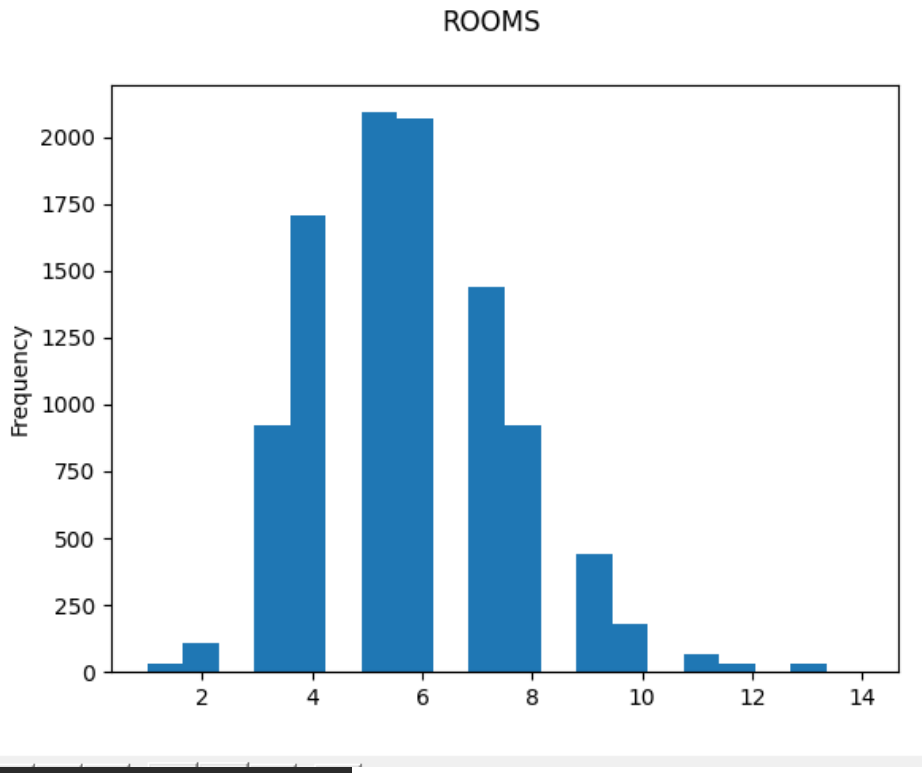
```
Welcome to the program!
Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
2
You have entered Housing Data.

Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
c
You selected BUILT
Count: 10,042
Mean: 1,966.95
Min: 1,919
Max: 2,012
Standard Deviation: 26.31
The Histogram of this column is now displayed.
```




```
Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
f
You selected to exit housing data

Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
3
Thank you for using the program, have a nice day!

Process finished with exit code 0
```

Test case #7. Shows successful test of housing file, ROOMS column

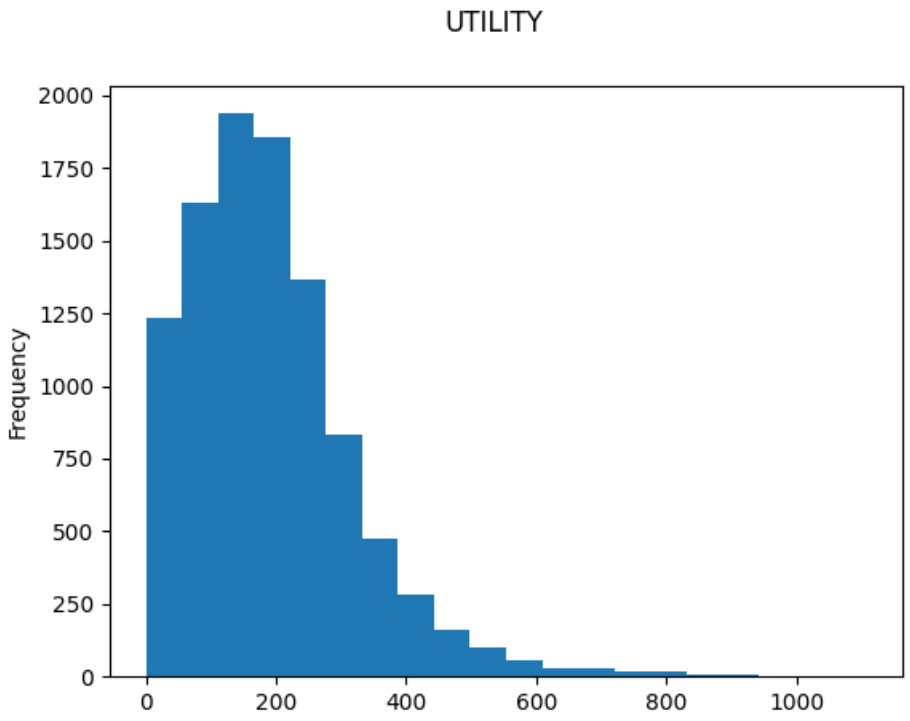
```
Welcome to the program!
Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
2
You have entered Housing Data.

Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
d
You selected ROOMS
Count: 10,042
Mean: 5.72
Min: 1
Max: 14
Standard Deviation: 1.88
The Histogram of this column is now displayed.
```




```
Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
f
You selected to exit housing data

Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
3
Thank you for using the program, have a nice day!

Process finished with exit code 0
```

Test case #8. Shows successful test of housing file, UTILITY column

```
Welcome to the program!
Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
2
You have entered Housing Data.

Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
e
You selected UTILITY
Count: 10,042
Mean: 189.59
Min: 0.00
Max: 1,107.58
Standard Deviation: 128.93
The Histogram of this column is now displayed.
```




```
Select the Column you want to analyze:
a. AGE
b. BEDROOMS
c. BUILT
d. ROOMS
e. UTILITY
f. Exit housing data
f
You selected to exit housing data

Select the file you want to analyze:
1. Population Data
2. Housing Data
3. Exit the Program
3
Thank you for using the program, have a nice day!

Process finished with exit code 0
```

Pylint results:

```
(venv) C:\Users\munki\PycharmProjects\lab5>pylint lab5.py

--------------------------------------------------------------------
Your code has been rated at 10.00/10 (previous run: 9.30/10, +0.70)
```