

SCREENSHOTS

```
File Edit View Run Kernel Tabs Settings Help
Lesson_3_Project.py: Storing Test Results.py: Python 3

[77]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
matplotlib inline

[78]: raw_data = {
    'first_name': ['Jason', 'Molly', 'Tina', 'Jake', 'Amy'],
    'last_name': ['Williams', 'Jacobson', '.', 'Miller', 'Cook'],
    'age': [42, 52, 36, 24, 73],
    'preTestScore': [4, 34, 31, '-', '-'],
    'postTestScore': ['25,000', '94,000', '57, 62, 78']
}

[79]: df = pd.DataFrame(raw_data)

[80]: df.to_csv('project.csv')
df

[81]: df

   first_name last_name age preTestScore postTestScore
0      Jason      Miller  42           4         25,000
1     Molly Jacobson  52          34          94,000
2        Tina         .  36           31           57
3         Jake      Miller  24           -           62
4         Amy       Cook  73           -           78

[82]: df.to_csv('project.csv')

[83]: df

   first_name last_name age preTestScore postTestScore
0      Jason      Miller  42           4         25,000
1     Molly Jacobson  52          34          94,000
2        Tina         .  36           31           57
3         Jake      Miller  24           -           62
4         Amy       Cook  73           -           78
```

```
File Edit View Run Kernel Tabs Settings Help
Lesson_3_Project.py: Storing Test Results.py: Python 3

[84]: df

   first_name last_name age preTestScore postTestScore
0      Jason      Miller  42           4         25,000
1     Molly Jacobson  52          34          94,000
2        Tina         .  36           31           57
3         Jake      Miller  24           -           62
4         Amy       Cook  73           -           78

[85]: df.to_csv('project.csv')

[86]: df

   first_name last_name age preTestScore postTestScore
0      Jason      Miller  42           4         25,000
1     Molly Jacobson  52          34          94,000
2        Tina         .  36           31           57
3         Jake      Miller  24           -           62
4         Amy       Cook  73           -           78

[87]: df.to_csv('project.csv', index=False)

[88]: df

   first_name last_name
0      Jason      Miller
1     Molly Jacobson
2        Tina         .
3         Jake      Miller
4         Amy       Cook

[89]: df.isna().any()

[90]: df.isna()
   first_name last_name
0      False      False
1      False      False
2      False      False
3      False      False
4      False      False
dtype: bool
```



```
df1.isna().any()
```

```
df1=pd.read_csv('project.csv')
```

```
df1.tail()
```