THIS SET OF 18 PANDAS FUNCTIONS WILL GET YOU 80% OF THE WAY THERE

```python
import pandas as pd

file = "file.csv"

# Reading CSV
df = pd.read_csv(file)

# Changing Delimiter
symbol = "|"
df = pd.read_csv(file, sep = symbol)
```

```python
import pandas as pd

file = "file.csv"

# Saving CSV
df.to_csv(file)

# Changing Delimiter while saving
symbol = "|"
df.to_csv(file, sep = symbol)
```

```python
import pandas as pd

data = [[1,2,3],
        [4,5,6]]

df = pd.DataFrame(data,
            columns = ["A", "B", "C"])
"""
   A  B  C
0  1  2  3
1  4  5  6
"""
```

```python
import pandas as pd

data = {"A":[1,2], "B":[3,4]}

df = pd.DataFrame(data)
"""
    A  B
0   1  3
1   2  4
"""
```

```python
import pandas as pd

df1 = pd.DataFrame([[1,"A"],
                    [2,"B"]],
                   columns = ["col1", "col2"])

df2 = pd.DataFrame([["A", 3],
                    ["B", 4]],
                   columns = ["col2", "col3"])

pd.merge(df1, df2, on = "col2", how = "inner")
"""
    col1 col2  col3
0     1    A     3
1     2    B     4
"""
```

```python
import pandas as pd

df = pd.DataFrame([[2,"A"],
                   [3,"B"],
                   [1,"C"]],
                  columns = ["col1", "col2"])


df.sort_values(by = "col1")
"""

    col1 col2
2     1    C
0     2    A
1     3    B
"""
```

```python
import pandas as pd

df1 = pd.DataFrame([[1,"A"],
                    [2,"B"]],
                   columns = ["col1", "col2"])


df2 = pd.DataFrame([["A", 3],
                    ["B", 4]],
                   columns = ["col3", "col4"])


pd.concat((df1, df2), axis = 1)
"""
    col1 col2 col3  col4
0    1    A    A     3
1    2    B    B     4
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"]],
                  columns = ["col1", "col2"])

df.rename(columns = {"col1":"col3",
                     "col2":"col4"})
"""
    col3 col4
0      1    A
1      2    B
"""
```

#9

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"]],
                  columns = ["col1", "col2"])


df["col3"] = df["col1"] + 2
"""

    col1 col2  col3
0      1    A     3
1      2    B     4
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"],
                   [2,"A"],
                   [3,"C"]],
                   columns = ["col1", "col2"])

# filter from list
filter_list = [1,2]
df[df.col1.isin(filter_list)]
"""

col1 col2
0      1     A
1      2     B
2      2     A
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"],
                   [2,"A"],
                   [3,"C"]],
                  columns = ["col1", "col2"])


df[df.col1 > 1]
"""

col1 col2
1     2     B
2     2     A
3     3     C
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"]],
                   columns = ["col1", "col2"])

df.drop(columns = ["col2"])
"""
    col1
0     1
1     2
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"],
                   [3,"A"],
                   [4,"C"]],
                  columns = ["col1", "col2"])

df.groupby("col2").col1.sum()
"""
     col2
A      4
B      2
C      4
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"],
                   [3,"A"],
                   [4,"C"]],
                   columns = ["col1", "col2"])

# Print Unique values
df.col2.unique()
"""
['A', 'B', 'C']
"""


# Number of unique values
df.col2.nunique()
"""
3
"""
```

# #14

```python
import pandas as pd
import numpy as np

df = pd.DataFrame([[1, "A"],
                   [2, np.nan],
                   [3, np.nan]],
                  columns = ["col1", "col2"])


df.col2.fillna("B", inplace = True)
"""

    col1 col2
0     1    A
1     2    B
2     3    B
"""
```
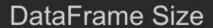
```python
import pandas as pd

def f(number):
  return number + 2

df = pd.DataFrame([[1,"A"],
                   [2,"B"]],
                  columns = ["col1", "col2"])


df["col3"] = df.col1.apply(f)
"""
    col1 col2  col3
0     1    A     3
1     2    B     4
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"],
                   [1,"A"]],
                  columns = ["col1", "col2"])


df.drop_duplicates()
"""
    col1 col2
0     1    A
1     2    B
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"],
                   [2,"A"],
                   [3,"C"]],
                  columns = ["col1", "col2"])

df.col2.value_counts()
"""

A     2
B     1
C     1
"""
```

```python
import pandas as pd

df = pd.DataFrame([[1,"A"],
                   [2,"B"],
                   [2,"A"],
                   [3,"C"]],
                  columns = ["col1", "col2"])


df.shape
"""

(4,2)
"""
```