# Task 14

## Exercise 1: CSV Files

### *Read a CSV file and print the contents of the file*

In [ ]:
```
import pandas as pd
import numpy as np

# Read the data
data = pd.read_csv('sampleCSV.csv', encoding='iso-8859-1')
data.head()
```

Out[ ]:

| | 1 | Eldon Base for stackable storage shelf, platinum | Muhammed MacIntyre | 3 | -213.25 | 38.94 | 35 | Nunavut | Storage & Organization | 0.8 |
|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 2 | 1.7 Cubic Foot Compact "Cube" Office Refrigera... | Barry French | 293 | 457.81 | 208.16 | 68.02 | Nunavut | Appliances | 0.58 |
| **1** | 3 | Cardinal Slant-D® Ring Binder, Heavy Gauge Vinyl | Barry French | 293 | 46.71 | 8.69 | 2.99 | Nunavut | Binders and Binder Accessories | 0.39 |
| **2** | 4 | R380 | Clay Rozendal | 483 | 1198.97 | 195.99 | 3.99 | Nunavut | Telephones and Communication | 0.58 |
| **3** | 5 | Holmes HEPA Air Purifier | Carlos Soltero | 515 | 30.94 | 21.78 | 5.94 | Nunavut | Appliances | 0.50 |
| **4** | 6 | G.E. Longer-Life Indoor Recessed Floodlight Bulbs | Carlos Soltero | 515 | 4.43 | 6.64 | 4.95 | Nunavut | Office Furnishings | 0.37 |

## Exercise 2: JSON Files

### *Read a JSON file and print the contents of the file*

In [ ]:
```
data=pd.read_json('sampleJSON.json')
data.head()
```

Out[ ]:

| | quiz |
|---|---|
| **maths** | {'q1': {'question': '5 + 7 = ?', 'options': ['... |
| **sport** | {'q1': {'question': 'Which one is correct team... |

## Exercise 3: Excel Files

### *Read an Excel file and print the contents of the file*

In [ ]:
```
data=pd.read_excel('sampleXLS.xls')
data.head()
```

Out[ ]:

| | 1 | Eldon Base for stackable storage shelf, platinum | Muhammed MacIntyre | 3 | -213.25 | 38.94 | 35 | Nunavut | Storage & Organization | 0.8 |
|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 2 | 1.7 Cubic Foot Compact "Cube" Office Refrigera... | Barry French | 293 | 457.8100 | 208.16 | 68.02 | Nunavut | Appliances | 0.58 |
| **1** | 3 | Cardinal Slant-D® Ring Binder, Heavy Gauge Vinyl | Barry French | 293 | 46.7075 | 8.69 | 2.99 | Nunavut | Binders and Binder Accessories | 0.39 |
| **2** | 4 | R380 | Clay Rozendal | 483 | 1198.9710 | 195.99 | 3.99 | Nunavut | Telephones and Communication | 0.58 |
| **3** | 5 | Holmes HEPA Air Purifier | Carlos Soltero | 515 | 30.9400 | 21.78 | 5.94 | Nunavut | Appliances | 0.50 |
| **4** | 6 | G.E. Longer-Life Indoor Recessed Floodlight Bulbs | Carlos Soltero | 515 | 4.4300 | 6.64 | 4.95 | Nunavut | Office Furnishings | 0.37 |

## Exercise 4: SQL Files

### *Read a SQL file and print the contents of the file*

In [ ]:
```
import sqlalchemy as sqla
import sqlite3

query="""
    CREATE TABLE test
```

```
    (a VARCHAR(20), b VARCHAR(20),
    c REAL,        d INTEGER
    );
"""

con.execute(query)
```

In [ ]:
```
con.commit()
data=[('Atlanta', 'Georgia', 1.25, 6),
      ('Tallahassee', 'Florida', 2.6, 3),
      ('Sacramento', 'California', 1.7, 5)]
stmt="INSERT INTO test VALUES(?, ?, ?, ?)"
con.executemany(stmt, data)
```

Out[ ]:
```
<sqlite3.Cursor at 0x127ecaecf40>
```

In [ ]:
```
con.commit()
cursor=con.execute('select * from test')
rows=cursor.fetchall()
rows
```

Out[ ]:
```
[('Atlanta', 'Georgia', 1.25, 6),
 ('Tallahassee', 'Florida', 2.6, 3),
 ('Sacramento', 'California', 1.7, 5)]
```

In [ ]:
```
pd.DataFrame(rows, columns=[x[0] for x in cursor.description])
```

Out[ ]:

| | a | b | c | d |
|---|---|---|---|---|
| **0** | Atlanta | Georgia | 1.25 | 6 |
| **1** | Tallahassee | Florida | 2.60 | 3 |
| **2** | Sacramento | California | 1.70 | 5 |