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 [ ]:
```
data=pd.read_sql('sampleSQL.sql', con=engine)
data.head()
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[8], line 1
----> 1 data=pd.read_sql('sampleSQL.sql', con=engine)
      2 data.head()

NameError: name 'engine' is not defined
```

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