

Question 1: Create a Series

Problem:

Create a Pandas Series with the elements 10, 20, 30, 40, 50. Print the Series.

Solution:

```
import pandas as pd

series = pd.Series([10, 20, 30, 40, 50])
print(series)
```

Expected Output:

```
0    10
1    20
2    30
3    40
4    50
dtype: int64
```

Question 2: Create a DataFrame

Problem:

Create a DataFrame with the following data:

- Name: ['John', 'Anna', 'Peter']
- Age: [28, 24, 35]
- City: ['New York', 'London', 'Berlin']

Print the DataFrame.

Solution:

```
import pandas as pd

data = {'Name': ['John', 'Anna', 'Peter'],
        'Age': [28, 24, 35],
        'City': ['New York', 'London', 'Berlin']}

df = pd.DataFrame(data)
print(df)
```

Expected Output:

	Name	Age	City
0	John	28	New York
1	Anna	24	London
2	Peter	35	Berlin

Question 3: Select a Column

Problem:

From the DataFrame below, select and print the `City` column.

```
import pandas as pd

data = {'Name': ['John', 'Anna', 'Peter'],
        'Age': [28, 24, 35],
        'City': ['New York', 'London', 'Berlin']}

df = pd.DataFrame(data)
```

Solution:

```
print(df['City'])
```

Expected Output:

```
0    New York
1    London
2    Berlin
Name: City, dtype: object
```

Question 4: Filter Rows

Problem:

Using the DataFrame below, filter the rows where the **Age** is greater than 30.

```
import pandas as pd

data = {'Name': ['John', 'Anna', 'Peter'],
        'Age': [28, 24, 35],
        'City': ['New York', 'London', 'Berlin']}

df = pd.DataFrame(data)
```

Solution:

```
filtered_df = df[df['Age'] > 30]
print(filtered_df)
```

Expected Output:

	Name	Age	City
2	Peter	35	Berlin

Question 5: Handle Missing Data

Problem:

Given the following DataFrame with missing data, fill the missing values with **'Unknown'**.

```
import pandas as pd

data = {'Name': ['John', None, 'Peter'],
        'Age': [28, 24, None],
        'City': ['New York', 'London', None]}

df = pd.DataFrame(data)
```

Solution:

```
df_filled = df.fillna('Unknown')
print(df_filled)
```

Expected Output:

	Name	Age	City
0	John	28	New York
1	Unknown	24	London
2	Peter	Unknown	Unknown