

```

import pandas as pd

# Creating the DataFrame
data = {
    'Employee': ['John', 'Alex', 'Riya', 'Steve'],
    'Department': ['HR', 'HR', 'Finance', 'Finance'],
    'Salary': [60000, 50000, 70000, 70000],
    'Age': [30, 25, 28, 32]
}
df = pd.DataFrame(data)

# a) Display the first two rows
print("First two rows:")
print(df.head(2))

# b) Add a new column 'Experience' with values [5, 3, 7, 8]
df['Experience'] = [5, 3, 7, 8]
print("\nDataFrame with Experience column:")
print(df)

# c) Find the average salary
average_salary = df['Salary'].mean()
print("\nAverage Salary of all employees:", average_salary)

```

First two rows:

	Employee	Department	Salary	Age
0	John	HR	60000	30
1	Alex	HR	50000	25

DataFrame with Experience column:

	Employee	Department	Salary	Age	Experience
0	John	HR	60000	30	5
1	Alex	HR	50000	25	3
2	Riya	Finance	70000	28	7
3	Steve	Finance	70000	32	8

Average Salary of all employees: 62500.0

```

# Categories and monthly expense data
categories = ['Groceries', 'Utilities', 'Rent', 'Transportation',
             'Entertainment']
expenses = [500, 200, 1200, 300, 150]

```

```

# Creating a Series

```

```

expense_series = pd.Series(expenses, index=categories)
print("\nMonthly Expenses:")
print(expense_series)

```

Monthly Expenses:

Groceries	500
-----------	-----

```
Utilities      200
Rent           1200
Transportation 300
Entertainment  150
dtype: int64
```

Categories and monthly expense data

```
categories = ['Groceries', 'Utilities', 'Rent', 'Transportation',
              'Entertainment']
expenses = [500, 200, 1200, 300, 150]
```

Creating a Series

```
expense_series = pd.Series(expenses, index=categories)
print("\nMonthly Expenses:")
print(expense_series)
```

Monthly Expenses:

```
Groceries      500
Utilities      200
Rent           1200
Transportation 300
Entertainment  150
dtype: int64
```

Months of the year

```
months = ['January', 'February', 'March', 'April', 'May', 'June',
           'July', 'August', 'September', 'October', 'November',
           'December']
```

Energy usage data

```
electricity_usage = [310, 320, 310, 330, 340, 370, 380, 360, 350, 360,
                     320, 330]
gas_usage = [20, 18, 16, 15, 12, 10, 8, 8, 12, 15, 17, 19]
```

Creating Series

```
electricity_series = pd.Series(electricity_usage, index=months)
gas_series = pd.Series(gas_usage, index=months)
```

```
print("\nElectricity Usage (kWh):")
print(electricity_series)
```

```
print("\nGas Usage (therms):")
print(gas_series)
```

Electricity Usage (kWh):

```
January      310
February     320
March         310
April         330
```

```
May      340
June     370
July     380
August   360
September 350
October  360
November 320
December 330
dtype: int64
```

Gas Usage (therms):

```
January    20
February   18
March      16
April      15
May        12
June       10
July        8
August      8
September  12
October    15
November   17
December   19
dtype: int64
```

Revenue data

```
revenue = [5000, 5200, 4800, 5400, 5600, 5800, 6100, 6200, 6500, 6900,
7000, 6900]
```

Creating Series

```
revenue_series = pd.Series(revenue, index=months)
print("\nMonthly Website Revenue (USD):")
print(revenue_series)
```

Monthly Website Revenue (USD):

```
January    5000
February   5200
March      4800
April      5400
May        5600
June       5800
July       6100
August     6200
September  6500
October    6900
November   7000
December   6900
dtype: int64
```

