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import numpy as np

# Creating a NumPy array
arr = np.array([1, 2, 3, 4, 5])

# Performing operations on the array
arr_squared = np.square(arr)
arr_sum = np.sum(arr)

# Printing the results
print("Original Array:", arr)
print("Squared Array:", arr_squared)
print("Sum of Array Elements:", arr_sum)

    Original Array: [1 2 3 4 5]
    Squared Array: [ 1  4  9 16 25]
    Sum of Array Elements: 15

import pandas as pd

# Creating a DataFrame
data = {'Name': ['Alice', 'Bob', 'Charlie', 'David'],
        'Age': [25, 30, 22, 35],
        'City': ['New York', 'San Francisco', 'Los Angeles', 'Chicago']}

df = pd.DataFrame(data)

# Displaying the DataFrame
print("Original DataFrame:")
print(df)

# Accessing specific columns
ages = df['Age']

# Adding a new column
df['Birth_Year'] = 2024 - df['Age']

# Filtering rows
young_people = df[df['Age'] < 30]

# Displaying the modified DataFrame
print("\nDataFrame with New Column and Filtered Rows:")
print(df)
print("\nFiltered DataFrame for Young People:")
print(young_people)

```



Original DataFrame:

	Name	Age	City
0	Alice	25	New York
1	Bob	30	San Francisco
2	Charlie	22	Los Angeles
3	David	35	Chicago

DataFrame with New Column and Filtered Rows:

	Name	Age	City	Birth_Year
0	Alice	25	New York	1999
1	Bob	30	San Francisco	1994
2	Charlie	22	Los Angeles	2002
3	David	35	Chicago	1989

Filtered DataFrame for Young People:

	Name	Age	City	Birth_Year
0	Alice	25	New York	1999
2	Charlie	22	Los Angeles	2002

