

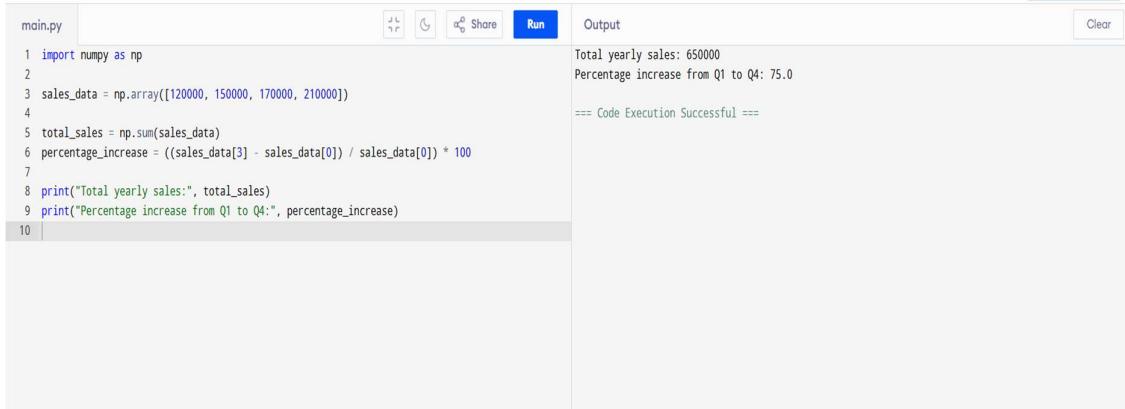
**Scenario:** You are working on a project that involves analysing the sales performance of a company over the past four quarters. The quarterly sales data is stored in a NumPy array named sales data, where each element represents the sales amount for a specific quarter. Your task is to calculate the total sales for the year and determine the percentage increase in sales from the first quarter to the fourth quarter.

**Question:** Using NumPy arrays and arithmetic operations calculate the total sales for the year and determine the percentage increase in sales from the first quarter to the fourth quarter?

**AIM:** To calculate the total yearly sales and the percentage increase from quarter 1 to quarter 4 using NumPy operations.

#### **PROCEDURE:**

1. Create a NumPy array storing bedrooms, area, and price.
2. Filter rows where the number of bedrooms is greater than four.
3. Extract the sale price column from the filtered rows.
4. Use np.mean() to find the average sale price.



The screenshot shows a Jupyter Notebook interface with a code cell and its output. The code cell contains Python code to calculate total yearly sales and the percentage increase from Q1 to Q4. The output cell displays the results: Total yearly sales: 650000 and Percentage increase from Q1 to Q4: 75.0, followed by a message indicating successful code execution.

```
main.py
1 import numpy as np
2
3 sales_data = np.array([120000, 150000, 170000, 210000])
4
5 total_sales = np.sum(sales_data)
6 percentage_increase = ((sales_data[3] - sales_data[0]) / sales_data[0]) * 100
7
8 print("Total yearly sales:", total_sales)
9 print("Percentage increase from Q1 to Q4:", percentage_increase)
```

Total yearly sales: 650000  
Percentage increase from Q1 to Q4: 75.0  
== Code Execution Successful ==