

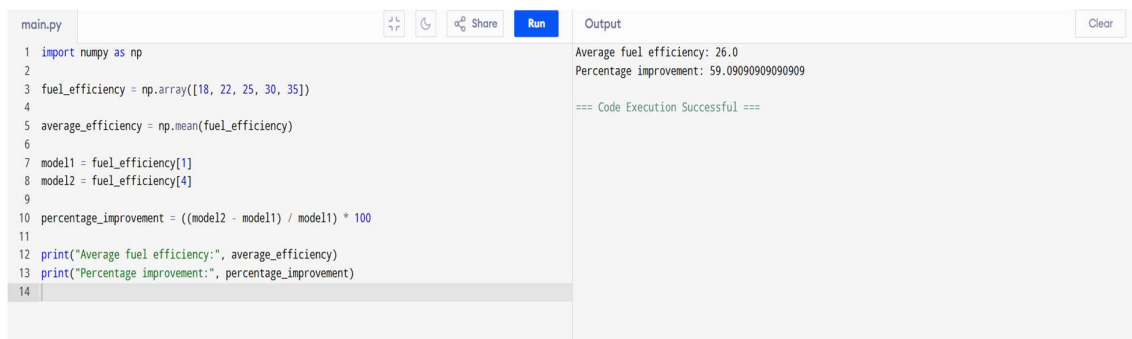
Scenario: You are a data analyst working for a car manufacturing company. As part of your analysis, you have a dataset containing information about the fuel efficiency of different car models. The dataset is stored in a NumPy array named `fuel_efficiency`, where each element represents the fuel efficiency (in miles per gallon) of a specific car model. Your task is to calculate the average fuel efficiency and determine the percentage improvement in fuel efficiency between two car models.

Question: How would you use NumPy arrays and arithmetic operations to calculate the average fuel efficiency and determine the percentage improvement in fuel efficiency between two car models?

AIM: To calculate average fuel efficiency and measure the percentage improvement between two car models using NumPy.

PROCEDURE:

1. Create a NumPy array containing mpg values of car models.
2. Compute average mileage using `np.mean()`.
3. Select two models for comparison using indexing.
4. Apply the percentage improvement formula.



```
main.py
1 import numpy as np
2
3 fuel_efficiency = np.array([18, 22, 25, 30, 35])
4
5 average_efficiency = np.mean(fuel_efficiency)
6
7 model1 = fuel_efficiency[1]
8 model2 = fuel_efficiency[4]
9
10 percentage_improvement = ((model2 - model1) / model1) * 100
11
12 print("Average fuel efficiency:", average_efficiency)
13 print("Percentage improvement:", percentage_improvement)
14
```

Output

```
Average fuel efficiency: 26.0
Percentage improvement: 59.09090909090909

=== Code Execution Successful ===
```