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Topic :- Array

1. Write a Python program to find inverse of matrix.

In [1]:
```
import numpy as np

def inverse_matrix(matrix):
    return np.linalg.inv(matrix)
matrix = np.array([[1,2],[3,4]])
inverse = inverse_matrix(matrix)
print("Matrix:\n", matrix)
print("Inverse:\n", inverse)
```

```
Matrix:
 [[1 2]
 [3 4]]
Inverse:
 [[-2.   1. ]
 [ 1.5 -0.5]]
```

2. Write a Python program to find sum of an array elements.

In [2]:
```
def sum_of_elements(array):
    return sum(array)
array = [1, 2, 3, 4, 5]
result = sum_of_elements(array)
print("Array:", array)
print("Sum of elements:", result)
```

```
Array: [1, 2, 3, 4, 5]
Sum of elements: 15
```

3. Write a Python program to perform multiplication of an array.

In [3]:
```
def multiply_elements(array):
    result = 1
    for element in array:
        result *= element
    return result
array = [1, 2, 3, 4, 5]
result = multiply_elements(array)
print("Array:", array)
print("Product of elements:", result)
```

```
Array: [1, 2, 3, 4, 5]
Product of elements: 120
```