PYTHON PROGRAMMING

LAB-20 ANSWERS

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1. Calculate the total revenue generated by two product categories in a store

Input: category1_revenue = np.array([500, 600, 700, 550])

category2_revenue = np.array([450, 700, 800, 600])

Output: Total Revenue: [950 1300 1500 1150]

Code:

```
import numpy as np #importing numpy as np.

first_array = np.array([500, 600, 700, 550]) # inputing the first array.
second_array = np.array([450, 700, 800, 600]) # inputing the second array.

total_revenue = first_array + second_array # adding first_array and second_array.

print("Total Revenue:", total_revenue) #printing the final result as total_revenue.
```

Output:

Total Revenue: [950 1300 1500 1150]

2. Calculate the profit made by a company

Input: revenue = np.array([10000, 12000, 11000, 10500])

expenses = np.array([4000, 5000, 4500, 4800])

Output: Profit: [6000 7000 6500 5700]

Code:

```
import numpy as np #importing numpy as np.

first_array = np.array([10000, 12000, 11000, 10500]) # inputing the first array.
second_array = np.array([4000, 5000, 4500, 4800])  # inputing the second array.

final_result= np.subtract(first_array, second_array) # substracting of first_array with second_array.

print("Profit:", final_result) # printing the final result as final_result.
```

Output:

Profit: [6000 7000 6500 5700]

3. Determine which products in a store are out of stock (quantity is 0).

Input: inventory = np.array([10, 0, 5, 0, 20, 0])

Output: Out of Stock Products: [0 0 0]

Code:

```
import numpy as np #importing numpy as np.

array = np.array([10, 0, 5, 0, 20, 0]) # inputing array of elements.

out_of_stock_products = inventory == 0

print("Out of Stock Products:", inventory[out_of_stock_products])
#printing final result.
```

Output:

Out of Stock Products: [0 0 0]

4.Calculate the total cost of items in a shopping cart, considering the quantity and price per item.

Input: quantity = np.array([2, 3, 4, 1])

price_per_item = np.array([10.0, 5.0, 8.0, 12.0])

Output: Total Cost of Items: [20. 15. 32. 12.]

Code:

```
import numpy as np # importing numpy as np.

First_list = np.array([2, 3, 4, 1]) # inputing array of list.
Second_list = np.array([10.0, 5.0, 8.0, 12.0]) # inputing array of list.

total_cost = np.multiply(First_list,Second_list)# multiplaying two array lists.

print("Total Cost of Items:", total_cost) # printing the final result as total_cost.
```

Output:

Total Cost of Items: [20. 15. 32. 12.]