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PYTHON LAB 20: NUMPY MATH OPRATIONS

QUESTIONS

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])

```
#import numpy library
import numpy as np

#array initialization
category1_revenue = np.array([500, 600, 700, 550])
category2_revenue = np.array([450, 700, 800, 600])

# calculating total revenues
total_revenue = category1_revenue + category2_revenue

# print the result
print("Total Revenue:", total_revenue)
```

Output:

Total Revenue: [950 1300 1500 1150]

Calculate the profit made by a company
Input: revenue = np.array([10000, 12000, 11000, 10500])
expenses = np.array([4000, 5000, 4500, 4800])

```
#import numpy library
import numpy as np

# array initialization
revenue = np.array([10000, 12000, 11000, 10500])
expenses = np.array([4000, 5000, 4500, 4800])

# calculate profit
```

```
profit = revenue - expenses

#print the result
print("Profit :",profit)
```

Output:

Profit : [6000 7000 6500 5700]

Determine which products in a store are out of stock (quantity is 0).
Input: inventory = np.array([10, 0, 5, 0, 20, 0])

```
#import numpy library
import numpy as np

#array initialization
inventory = np.array([10, 0, 5, 0, 20, 0])

#checking out of stock
out_of_stock_indices = np.where(inventory == 0)[0]
out_of_stock_products = inventory[out_of_stock_indices]

#print the result
print("Out of Stock Products:", out_of_stock_products)
```

Output:

Out of Stock Products: [0 0 0]

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])

```
#import numpy library
import numpy as np

#initialize array
quantity = np.array([2, 3, 4, 1])
price_per_item = np.array([10.0, 5.0, 8.0, 12.0])
```

```
#calculate the total cost of item
total_cost_of_item = quantity * price_per_item

#print the result
print("Total cost of items :",total_cost_of_item)
```

Output:

Total cost of items : [20. 15. 32. 12.]