6. Scenario: You are a cashier at a grocery store and need to calculate the total cost of a customer's

purchase, including applicable discounts and taxes. You have the item prices and quantities in

separate lists, and the discount and tax rates are given as percentages. Your task is to calculate the

total cost for the customer.

Question: Use arithmetic operations to calculate the total cost of a customer's purchase, including

discounts and taxes, given the item prices, quantities, discount rate, and tax rate?

Program :

#6

import pandas as pd

import numpy as np

df=pd.read\_excel(r"C:\Users\hares\Documents\customer\_data.xlsx")

prices=df['price'].to\_numpy()

quantity=df['quantity'].to\_numpy()

item\_total=np.multiply(prices,quantity)

df['item\_total']=item\_total

subtotal=np.sum(item\_total)

discount=10

tax=8

after\_discount=subtotal\*(discount/100)

after\_tax=after\_discount\*(tax/100)

print("subtotal : ",subtotal)

print("Total amount after discount : ",after\_discount)

print("Total amount after tax : ",round(after\_tax,2))

output:

subtotal : 712

Total amount after discount : 71.2

Total amount after tax : 5.7

Dataset :

|  |  |  |
| --- | --- | --- |
| **item** | **price** | **quantity** |
| Apple | 10 | 2 |
| Bread | 20 | 1 |
| Milk | 5 | 4 |
| Eggs | 6 | 12 |
| Rice (1kg) | 50 | 1 |
| Oil (1L) | 120 | 1 |
| Soap | 30 | 3 |
| Shampoo | 150 | 1 |
| Toothpaste | 45 | 2 |
| Detergent | 80 | 1 |