

# CSC500 – Week 4 Assignment

Student: Cervonte Allen

Topic: Class basics with ItemToPurchase (two items + total)

## Extended Description (Simple Words)

This program uses a small class called ItemToPurchase. Each item has a name, a price, and a quantity. We ask the user for two items. We print each item's cost (price x quantity) and then print the total for both. This week teaches how to define a class, make objects, store data inside them, and use a method to print costs.

## Pseudocode

```
CLASS ItemToPurchase:
    FIELDS: name, price, quantity
    METHOD print_item_cost:
        PRINT "<name> <qty> @ $<price> = $<price*qty>"

MAIN:
    ASK for first item name, price, quantity -> make item1
    ASK for second item name, price, quantity -> make item2
    PRINT "TOTAL COST"
    CALL item1.print_item_cost()
    CALL item2.print_item_cost()
    PRINT sum of both costs as Total
```

## Python Source Code

```
# Week 4 - ItemToPurchase (two items) and total
class ItemToPurchase:
    def __init__(self, name="none", price=0.0, quantity=0):
        self.item_name = name
        self.item_price = float(price)
        self.item_quantity = int(quantity)

    def print_item_cost(self):
        cost = self.item_price * self.item_quantity
        print(f"{self.item_name} {self.item_quantity} @ ${self.item_price:g} = ${cost:g}")

def main():
    print("Item 1")
    n1 = input("Enter the item name: ")
    p1 = float(input("Enter the item price: "))
    q1 = int(input("Enter the item quantity: "))
    item1 = ItemToPurchase(n1, p1, q1)

    print("\nItem 2")
    n2 = input("Enter the item name: ")
    p2 = float(input("Enter the item price: "))
    q2 = int(input("Enter the item quantity: "))
    item2 = ItemToPurchase(n2, p2, q2)

    print("\nTOTAL COST")
    item1.print_item_cost()
    item2.print_item_cost()
    total = item1.item_price*item1.item_quantity + item2.item_price*item2.item_quantity
    print(f"Total: ${total:g}")

if __name__ == "__main__":
    main()
```

### ***Sample Run (text)***

Item 1  
Enter the item name: Chocolate Chips  
Enter the item price: 3  
Enter the item quantity: 1

Item 2  
Enter the item name: Bottled Water  
Enter the item price: 1  
Enter the item quantity: 10

TOTAL COST  
Chocolate Chips 1 @ \$3 = \$3  
Bottled Water 10 @ \$1 = \$10  
Total: \$13