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Course: CSC500-1 Principles of Programming

Module 4: Portfolio Milestone

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# COPY THIS LINE OF CODE - BEGINNING

class ItemToPurchase:

def \_\_init\_\_(self, item\_name="none", item\_price=0, item\_quantity=0):

self.item\_name = item\_name

self.item\_price = item\_price

self.item\_quantity = item\_quantity

def print\_item\_cost(self):

total\_cost = self.item\_price \* self.item\_quantity

print(f"{self.item\_name} {self.item\_quantity} @ ${self.item\_price} = ${total\_cost}")

def main():

print("Item 1")

item1\_name = input("Enter the item name:\n")

item1\_price = float(input("Enter the item price:\n"))

item1\_quantity = int(input("Enter the item quantity:\n"))

item1 = ItemToPurchase(item1\_name, item1\_price, item1\_quantity)

print("\nItem 2")

item2\_name = input("Enter the item name:\n")

item2\_price = float(input("Enter the item price:\n"))

item2\_quantity = int(input("Enter the item quantity:\n"))

item2 = ItemToPurchase(item2\_name, item2\_price, item2\_quantity)

print("\nTOTAL COST")

item1.print\_item\_cost()

item2.print\_item\_cost()

total\_cost = (item1.item\_price \* item1.item\_quantity) + (item2.item\_price \* item2.item\_quantity)

print(f"\nTotal: ${total\_cost}")

if \_\_name\_\_ == "\_\_main\_\_":

main()

# COPY THIS LINE OF CODE – ENDING

Figure 1 - Class Items to Purchase and Print Item cost Function.

This code defines a Python class named ItemToPurchase, which models an item that someone might want to purchase. The class has a constructor method (\_\_init\_\_) and a method to print the cost of the item (print\_item\_cost). A class in Python is a blueprint, and objects created by instantiating them are called instances of classes. Methods inside classes are called functions.

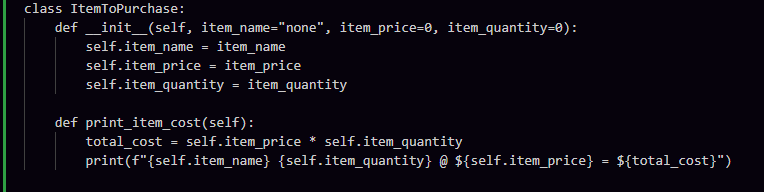


Figure 2 – The main function in this code snippet prompts the user to input details for two items, creates instances of the ItemToPurchase class for these items, and then calculates and prints the total cost.

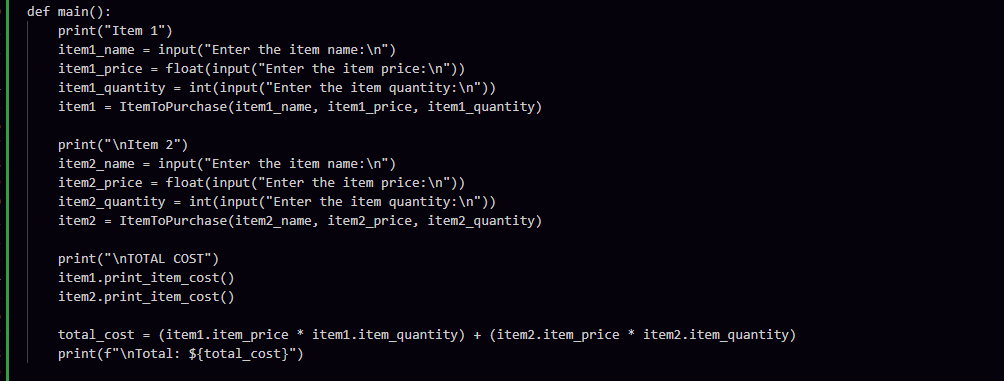


Figure 3 – Conditional Execution of the Script

Named to main when the script is not being imported anywhere, it ensures that the main function is only executed when the script is called directly. Ie, when the script, in this case module4-portfolio-assignmnet.py is run directly, like ‘python module4-portfolio-assignmnet.py’, the the \_\_name\_\_ is set to \_\_main\_\_, and the main() function is executed.

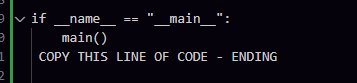
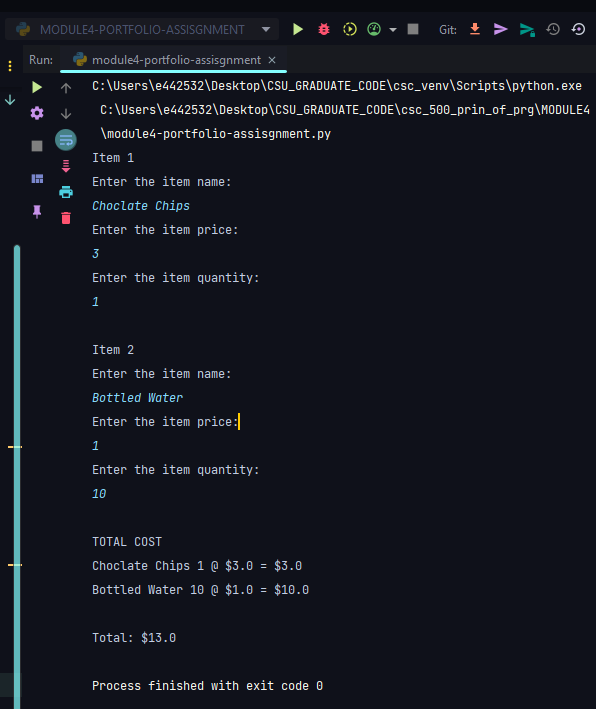


Figure 4 – Output of Program, that asks for input from user for 2 items and runs calculations on input name, prices and quantity. Then the program prints the total cost for and for each item combines, name, quantity and total cost.



Process finished with exit code 0 This line indicates that the program ran successfully without any errors. The exit code 0 is a standard way to signal that the program completed successfully.

In Summary, The program collects the name, price, and quantity for two items from the user.

It then calculates and prints the total cost for each item. Finally, it calculates and prints the combined total cost of both items. The program ends successfully, as indicated by the exit code 0.

***Githublink -*** [***https://github.com/65AR645ASAN/csc\_500\_prin\_of\_prg/blob/main/MODULE4/Module4-PortfolioAssignment-CSC500-1-AdityaSandhu.docx***](https://github.com/65AR645ASAN/csc_500_prin_of_prg/blob/main/MODULE4/Module4-PortfolioAssignment-CSC500-1-AdityaSandhu.docx)

***Work Cited***

Programiz. (n.d.). Python Classes and Objects. Programiz. https://www.programiz.com/python-programming/class