Misty Caver

CSC500

Portfolio Milestone

Pseudocode

BEGIN PROGRAM

CLASS ItemToPurchase

METHOD \_\_init\_\_(name="none", price=0.0, quantity=0, description="none")

SET self.item\_name = name

SET self.item\_price = price

SET self.item\_quantity = quantity

SET self.item\_description = description

METHOD print\_item\_cost()

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

DISPLAY item\_name, item\_quantity, "@", item\_price, "=", total\_cost

METHOD print\_item\_description()

DISPLAY item\_name + ": " + item\_description

CLASS ShoppingCart

METHOD \_\_init\_\_(customer\_name="none", current\_date="January 1, 2020")

SET self.customer\_name = customer\_name

SET self.current\_date = current\_date

SET self.cart\_items = empty list

METHOD add\_item(item)

APPEND item to cart\_items

METHOD remove\_item(item\_name)

IF item\_name found in cart\_items

REMOVE that item

ELSE

DISPLAY "Item not found in cart. Nothing removed."

METHOD modify\_item(updated\_item)

IF item\_name in cart\_items

UPDATE fields (description, price, quantity) with non-default values

ELSE

DISPLAY "Item not found in cart. Nothing modified."

METHOD get\_num\_items\_in\_cart()

RETURN SUM of all item\_quantity in cart\_items

METHOD get\_cost\_of\_cart()

RETURN SUM of item\_price \* item\_quantity for all items

METHOD print\_total()

DISPLAY customer\_name + "'s Shopping Cart - " + current\_date

DISPLAY "Number of Items: " + total number of items

IF cart\_items is empty

DISPLAY "SHOPPING CART IS EMPTY"

ELSE

FOR each item in cart\_items

**CODE**

**# ---------- Step 1–3: ItemToPurchase ----------**

**class ItemToPurchase:**

**def \_\_init\_\_(self, item\_name="none", item\_price=0.0, item\_quantity=0, item\_description="none"):**

**self.item\_name = item\_name**

**self.item\_price = float(item\_price)**

**self.item\_quantity = int(item\_quantity)**

**self.item\_description = item\_description**

**def print\_item\_cost(self):**

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

**print(f"{self.item\_name} {self.item\_quantity} @ ${self.item\_price:.0f} = ${total\_cost:.0f}")**

**def print\_item\_description(self):**

**print(f"{self.item\_name}: {self.item\_description}")**

**# ---------- Step 4: ShoppingCart ----------**

**class ShoppingCart:**

**def \_\_init\_\_(self, customer\_name="none", current\_date="January 1, 2020"):**

**self.customer\_name = customer\_name**

**self.current\_date = current\_date**

**self.cart\_items = []**

**# Step 8**

**def add\_item(self, item):**

**self.cart\_items.append(item)**

**# Step 9**

**def remove\_item(self, item\_name):**

**for i, it in enumerate(self.cart\_items):**

**if it.item\_name == item\_name:**

**self.cart\_items.pop(i)**

**return**

**print("Item not found in cart. Nothing removed.")**

**# Step 10**

**def modify\_item(self, updated\_item):**

**for it in self.cart\_items:**

**if it.item\_name == updated\_item.item\_name:**

**if updated\_item.item\_description != "none":**

**it.item\_description = updated\_item.item\_description**

**if updated\_item.item\_price != 0.0:**

**it.item\_price = updated\_item.item\_price**

**if updated\_item.item\_quantity != 0:**

**it.item\_quantity = updated\_item.item\_quantity**

**return**

**print("Item not found in cart. Nothing modified.")**

**# Step 6a**

**def get\_num\_items\_in\_cart(self):**

**return sum(it.item\_quantity for it in self.cart\_items)**

**# Step 6b**

**def get\_cost\_of\_cart(self):**

**return sum(it.item\_price \* it.item\_quantity for it in self.cart\_items)**

**# Step 6c**

**def print\_total(self):**

**print(f"{self.customer\_name}'s Shopping Cart - {self.current\_date}")**

**num\_items = self.get\_num\_items\_in\_cart()**

**print(f"Number of Items: {num\_items}")**

**if not self.cart\_items:**

**print("SHOPPING CART IS EMPTY")**

**return**

**for it in self.cart\_items:**

**it.print\_item\_cost()**

**print(f"Total: ${self.get\_cost\_of\_cart():.0f}")**

**# Step 6d**

**def print\_descriptions(self):**

**print(f"{self.customer\_name}'s Shopping Cart - {self.current\_date}")**

**print("Item Descriptions")**

**for it in self.cart\_items:**

**it.print\_item\_description()**

**# ---------- Step 5: Menu ----------**

**def print\_menu(cart):**

**menu = (**

**"MENU\n"**

**"a - Add item to cart\n"**

**"r - Remove item from cart\n"**

**"c - Change item quantity\n"**

**"i - Output items' descriptions\n"**

**"o - Output shopping cart\n"**

**"q - Quit"**

**)**

**choice = ""**

**while choice != "q":**

**print()**

**print(menu)**

**choice = input("Choose an option:\n").strip().lower()**

**if choice == "a":**

**# Step 8**

**print("ADD ITEM TO CART")**

**name = input("Enter the item name:\n").strip()**

**description = input("Enter the item description:\n").strip()**

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

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

**cart.add\_item(ItemToPurchase(name, price, quantity, description))**

**elif choice == "r":**

**# Step 9**

**print("REMOVE ITEM FROM CART")**

**name = input("Enter name of item to remove:\n").strip()**

**cart.remove\_item(name)**

**elif choice == "c":**

**# Step 10**

**print("CHANGE ITEM QUANTITY")**

**name = input("Enter the item name:\n").strip()**

**quantity = int(input("Enter the new quantity:\n"))**

**cart.modify\_item(ItemToPurchase(item\_name=name, item\_quantity=quantity))**

**elif choice == "i":**

**print()**

**cart.print\_descriptions()**

**elif choice == "o":**

**print()**

**cart.print\_total()**

**elif choice == "q":**

**break**

**else:**

**continue**

**# ---------- Step 7: Main ----------**

**def main():**

**customer\_name = input("Enter customer's name:\n")**

**current\_date = input("Enter today's date:\n")**

**print()**

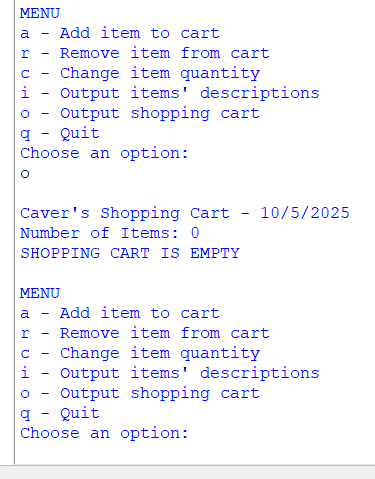
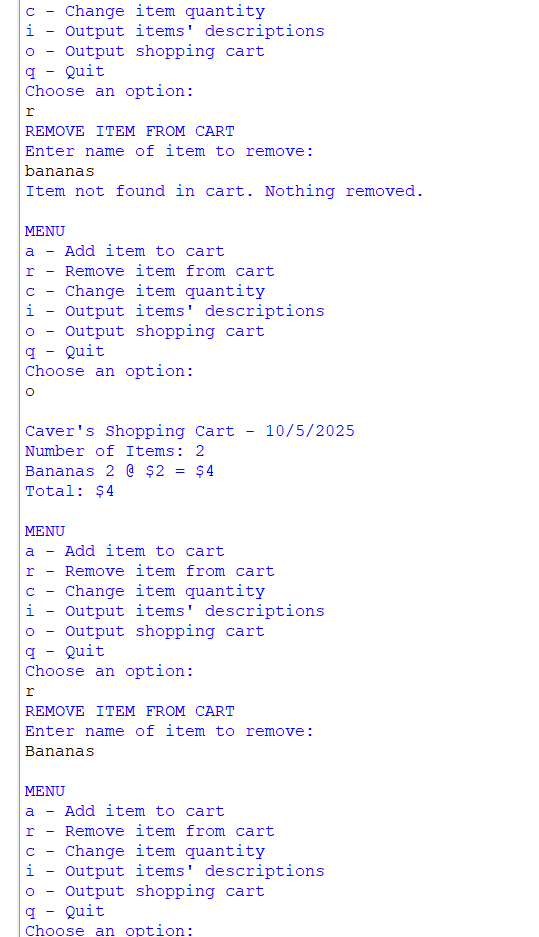
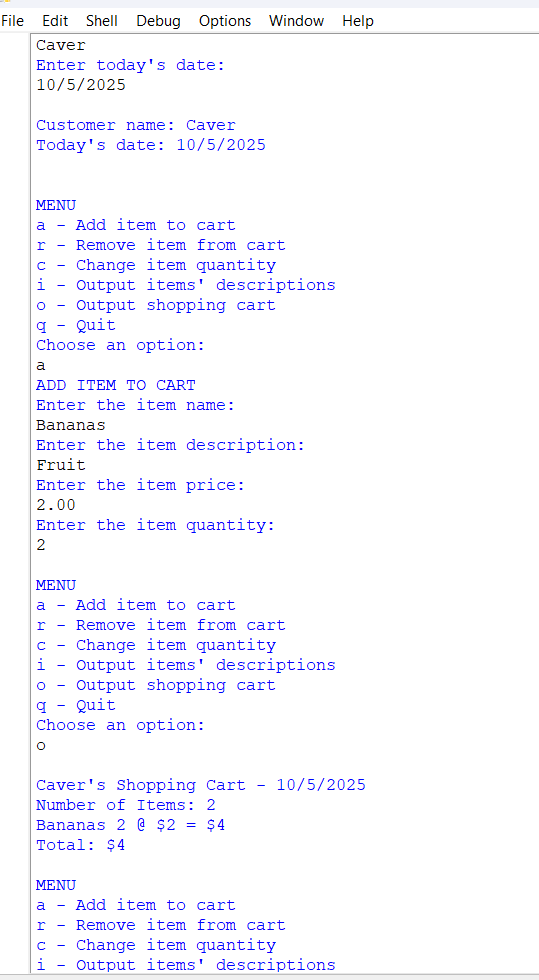
**print(f"Customer name: {customer\_name}")**

**print(f"Today's date: {current\_date}")**

**print()**

**cart = ShoppingCart(customer\_name, current\_date)**

**print\_menu(cart)**

**Execution-**