Part one code :  
class ItemToPurchase:  
 def \_\_init\_\_(self):  
 self.item\_name = "none"  
 self.item\_price = 0.0  
 self.item\_quantity = 0  
  
 def print\_item\_cost(self):  
 print(f"{self.item\_name} {self.item\_quantity} @ ${self.item\_price} = ${self.item\_quantity \* self.item\_price}")  
  
  
def main():  
 item1 = ItemToPurchase()  
 item1.item\_name = input("Enter the item name:\n")  
 item1.item\_price = float(input("Enter the item price:\n"))  
 item1.item\_quantity = int(input("Enter the item quantity:\n"))  
  
 item2 = ItemToPurchase()  
 item2.item\_name = input("Enter the item name:\n")  
 item2.item\_price = float(input("Enter the item price:\n"))  
 item2.item\_quantity = int(input("Enter the item quantity:\n"))  
  
 print("TOTAL 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}")  
  
  
if \_\_name\_\_ == "\_\_main\_\_":  
 main()

Part one results:

A screenshot of a computer program

Description automatically generated

Part two code :

class ItemToPurchase:  
 def \_\_init\_\_(self):  
 self.item\_name = "none"  
 self.item\_price = 0.0  
 self.item\_quantity = 0  
  
 def print\_item\_cost(self):  
 print(f"{self.item\_name} {self.item\_quantity} @ ${self.item\_price} = ${self.item\_quantity \* self.item\_price}")  
  
  
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 = []  
  
 def add\_item(self, ItemToPurchase):  
 self.cart\_items.append(ItemToPurchase)  
  
 def remove\_item(self, item\_name):  
 item\_found = False  
 for item in self.cart\_items:  
 if item.item\_name == item\_name:  
 self.cart\_items.remove(item)  
 item\_found = True  
 break  
 if not item\_found:  
 print("Item not found in cart. Nothing removed.")  
  
 def modify\_item(self, ItemToPurchase):  
 for item in self.cart\_items:  
 if item.item\_name == ItemToPurchase.item\_name:  
 if ItemToPurchase.item\_price != 0:  
 item.item\_price = ItemToPurchase.item\_price  
 if ItemToPurchase.item\_quantity != 0:  
 item.item\_quantity = ItemToPurchase.item\_quantity  
 return  
 print("Item not found in cart. Nothing modified.")  
  
 def get\_num\_items\_in\_cart(self):  
 total\_quantity = sum(item.item\_quantity for item in self.cart\_items)  
 return total\_quantity  
  
 def get\_cost\_of\_cart(self):  
 total\_cost = sum(item.item\_price \* item.item\_quantity for item in self.cart\_items)  
 return total\_cost  
  
 def print\_total(self):  
 total\_cost = self.get\_cost\_of\_cart()  
 if total\_cost == 0:  
 print("SHOPPING CART IS EMPTY")  
 else:  
 print(f"{self.customer\_name}'s Shopping Cart - {self.current\_date}")  
 print(f"Number of Items: {self.get\_num\_items\_in\_cart()}")  
 for item in self.cart\_items:  
 item.print\_item\_cost()  
 print(f"Total: ${total\_cost}")  
  
 def print\_descriptions(self):  
 print(f"{self.customer\_name}'s Shopping Cart - {self.current\_date}")  
 print("Item Descriptions")  
 for item in self.cart\_items:  
 print(f"{item.item\_name}: {item.item\_description}")  
  
  
def print\_menu(cart):  
 menu = """  
MENU  
a - Add item to cart  
r - Remove item from cart  
c - Change item quantity  
i - Output items' descriptions  
o - Output shopping cart  
q - Quit  
"""  
 command = ''  
 while command != 'q':  
 print(menu)  
 command = input("Choose an option:\n")  
 if command == 'a':  
 print("ADD ITEM TO CART")  
 item\_name = input("Enter the item name:\n")  
 item\_desc = input("Enter the item description:\n")  
 item\_price = float(input("Enter the item price:\n"))  
 item\_quantity = int(input("Enter the item quantity:\n"))  
 new\_item = ItemToPurchase()  
 new\_item.item\_name = item\_name  
 new\_item.item\_description = item\_desc  
 new\_item.item\_price = item\_price  
 new\_item.item\_quantity = item\_quantity  
 cart.add\_item(new\_item)  
 elif command == 'r':  
 print("REMOVE ITEM FROM CART")  
 item\_name = input("Enter name of item to remove:\n")  
 cart.remove\_item(item\_name)  
 elif command == 'c':  
 print("CHANGE ITEM QUANTITY")  
 item\_name = input("Enter the item name:\n")  
 quantity = int(input("Enter the new quantity:\n"))  
 item\_to\_modify = ItemToPurchase()  
 item\_to\_modify.item\_name = item\_name  
 item\_to\_modify.item\_quantity = quantity  
 cart.modify\_item(item\_to\_modify)  
 elif command == 'i':  
 cart.print\_descriptions()  
 elif command == 'o':  
 cart.print\_total()  
  
  
def main():  
 customer\_name = input("Enter customer's name:\n")  
 current\_date = input("Enter today's date:\n")  
 print(f"Customer name: {customer\_name}")  
 print(f"Today's date: {current\_date}")  
 cart = ShoppingCart(customer\_name, current\_date)  
 print\_menu(cart)  
  
  
if \_\_name\_\_ == "\_\_main\_\_":  
 main()

Part two results:

Initial name and date as well as add item:

A screenshot of a computer program

Description automatically generated

Display item description :

A screenshot of a computer menu

Description automatically generated

Change item quantity:

A screenshot of a computer program

Description automatically generated

Output shopping cart :

A screenshot of a computer program

Description automatically generated

Remove Item :

A screenshot of a computer program

Description automatically generated