

Online Shopping System

You are developing an online shopping application where customers can browse products, add them to a cart, and place orders. Each product has a name, price, and available quantity. Your task is to implement a feature that allows customers to add products to their shopping cart and proceed to checkout.

Task:

Write a Python program that implements the following functionalities:

- **Define a class Product with the following attributes:**

name: string

price: float

quantity_available: integer

- **Implement a class ShoppingCart that supports the following operations:**

`add_to_cart(product_name, quantity)`: Adds the specified quantity of the product to the cart. If the product is not available in sufficient quantity, print an appropriate message.

`view_cart()`: Prints the products currently in the cart along with their quantities and total price.

`checkout()`: Processes the checkout by deducting the quantities of products in the cart from the available quantities, updating the inventory. Print a message indicating successful checkout or reasons for failure (e.g., insufficient quantity). Use a dictionary or list to store available products (product_name as key).

- **Implement the program to allow users to:**

Add products to their cart.

View their cart before checking out.

Checkout and update the inventory accordingly.

Deliverables:

It encourages a comprehensive approach to handling real-world scenarios in programming and submit the code based on given task

Bonus task:

Handle edge cases such as adding non-existing products or negative quantities.

Utilize control statements (if, else) to manage conditions.

Implement string operations for printing messages and displaying information.

Example Usage:

Consider initializing some products and allowing a user to interact with the shopping cart through a command-line interface or a simple function-based interaction.