**Exercise: Online Store Order Processing**

You are building an online store order processing system. Write a Python program that models the process of accepting and processing orders. The program should include the following functionalities:

1. Define an initial inventory as a dictionary, where the keys are item names, and the values are dictionaries containing the quantity and price of each item.

2. Define a function called `add\_to\_cart` that takes a cart list, an item name, and a quantity as arguments. The function should check if the item is available in the inventory and if the requested quantity is available. If available, it should add the item and quantity to the cart list and update the inventory accordingly. If not available, it should print an appropriate message.

3. Define a function called `calculate\_total` that takes a cart list as a positional argument (`\*args`) and any additional discounts as keyword arguments (`\*\*kwargs`). The function should calculate the total price of the items in the cart, considering the quantity and prices from the inventory. It should also apply any applicable discounts specified as keyword arguments.

4. Define a function called `process\_order` that takes a cart list as a positional argument (`\*args`) and any additional order details as keyword arguments (`\*\*kwargs`). The function should call `calculate\_total` to get the total price, print the order details, and print the total price. It should also update the inventory by reducing the quantities of the items in the cart.

Here's a skeleton code to get you started:

| *# Step 1: Define the initial inventory* inventory = {  "shirt": {"quantity": 10, "price": 20.99},  "pants": {"quantity": 5, "price": 35.50},  "shoes": {"quantity": 7, "price": 49.99},  *# Add more items to the inventory* }  *# Step 2: Define the function add\_to\_cart* def add\_to\_cart(cart, item, quantity):  *# Check if the item is available in the inventory and if the quantity is available*  *# Add the item and quantity to the cart list*  *# Update the inventory accordingly*  pass  *# Step 3: Define the function calculate\_total* def calculate\_total(\*args, \*\*kwargs):  *# Calculate the total price of the items in the cart*  *# Apply any applicable discounts*  *# Return the total price*  pass  *# Step 4: Define the function process\_order* def process\_order(\*args, \*\*kwargs):  *# Call calculate\_total to get the total price*  *# Print the order details and total price*  *# Update the inventory by reducing the quantities of the items in the cart*  pass  *# Test the program by adding items to the cart, processing the order, and checking the inventory* *# Add more test cases and scenarios as needed* |
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| *# Test the program* cart = [] add\_to\_cart(cart, "shirt", 2) add\_to\_cart(cart, "pants", 4) add\_to\_cart(cart, "shoes", 3) add\_to\_cart(cart, "hat", 1) *# Testing an unavailable item*  process\_order(\*cart, discount=10) |
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In this exercise, you will fill in the details of each function to implement the required functionalities. You can test the program by adding items to the cart, processing the order, and checking the updated inventory. This exercise allows you to practice working with dictionaries, lists, and functions with variable-length arguments (`\*args` and `\*\*kwargs`), as well as implementing a larger system involving online store order processing.