

Activity #2:

Task: Building a basic Shopping System (Object-Oriented Approach)

In this task, you will be creating an object-oriented implementation of a basic shopping system. You'll define classes to represent products, a shopping cart, and interactions between them.

Requirements:

1. Product Class:

Create a "Product" class with the following attributes:

- "name": The name of the product.
- "price": The price of the product.

2. ShoppingCart Class:

Create a "ShoppingCart" class with the following attributes:

- "user_balance": The balance available to the user for purchasing products.
- "products": A list to store the products added to the shopping cart.

Implement the following methods for the "ShoppingCart" class:

- "add_product(product)": Adds a product to the shopping cart.
- "list_products()": Lists the products currently in the shopping cart.
- "purchase_product(index)": Allows the user to purchase a product from the cart if they have enough balance.

3. Execution:

1. Create instances of the "Product" class to represent different products.
2. Create an instance of the "ShoppingCart" class with an initial user balance.
3. Add products to the shopping cart and list the products in the cart.
4. Simulate purchasing products from the cart, updating the user balance accordingly.

Instructions:

1. Define the "Product" class with appropriate attributes and methods.
2. Define the "ShoppingCart" class with attributes and methods to manage products and the user's balance.
3. Create instances of the "Product" class for a few different products.
4. Create an instance of the "ShoppingCart" class with an initial user balance.
5. Add products to the shopping cart and list the products in the cart.
6. Simulate purchasing products from the cart and display the updated balance after each purchase.

Filenames:

act2_LASTNAME_FIRSTNAME_PCNumber_3A.py (CS3A)

act2_LASTNAME_FIRSTNAME_PCNumber_3B.py (CS3B)

Example Output:

Added product: Laptop (₱89000)

Added product: Phone (₱10000)

Products in cart:

1. Laptop - ₱89000

2. Phone - ₱10000

Available balance: ₱1005352

Purchased Laptop for ₱89000. Remaining balance: ₱916352