Exercise 3

A small electronics shop wants to build a simple inventory management system using Python.

Write a program that:

- Stores products in a **nested dictionary**, where
  - **key** = product ID (string)
  - **value** = another dictionary containing keys: `"name"`, `"price"`, and `"qty"`.

Example:

```
inventory = {
   "P101": {"name": "Laptop", "price": 1200, "qty": 5},
   "P102": {"name": "Mouse", "price": 25, "qty": 20}
}
```

1. Display a **menu** repeatedly using a while loop:

1. View Inventory
2. Add New Product
3. Purchase Product
4. Exit

2. Implement features:
   a. **View Inventory** → Print all products using a for loop.
   b. **Add New Product** → Ask user for ID, name, price, quantity and add to dictionary.
   c. **Purchase Product** →
      i. Ask for product ID and quantity.
      ii. Check if product exists using if.
      iii. If enough stock → reduce quantity and print total price.

iv. If not enough stock → print a warning and use continue.
v. If user enters an invalid ID → use continue.

d. **Exit** → End the loop using break.

Expected Sample Run (Example)

Welcome to Electronics Shop Inventory System

Menu:
1. View Inventory
2. Add New Product
3. Purchase Product
4. Exit
Enter choice (1-4): 1

Current Inventory:
ID: P101 | Name: Laptop | Price: $1200 | Qty: 5
ID: P102 | Name: Mouse | Price: $25 | Qty: 20
ID: P103 | Name: Keyboard | Price: $45 | Qty: 15

Menu:
1. View Inventory
2. Add New Product
3. Purchase Product
4. Exit
Enter choice (1-4): 2
Enter new product ID: P104
Enter product name: Monitor
Enter product price: 300
Enter product quantity: 10
Product Monitor added successfully!

Menu:
1. View Inventory
2. Add New Product
3. Purchase Product
4. Exit
Enter choice (1-4): 3
Enter product ID to purchase: P102
Enter quantity to purchase: 3
Purchase successful! Total = $7