ITM
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Exercise 20

Nested Loops

Tasks:

1. You are required to develop a simulated vending machine program using C++ that utilizes nested **while** loops. The vending machine offers three products: **Cola, Chips,** and **Candy**. Each product has a fixed price. The user can repeatedly make selections, insert coins, and receive the chosen product.

   Here are the details of the products:
   - Cola costs $1.50
   - Chips cost $1.25
   - Candy costs $1.00

   The user can insert coins of $0.25, $0.50, or $1.00. The program should prompt the user to insert coins and keep track of the total inserted amount. Once the user inserts enough money for the selected product, the product is dispensed, and any change is returned.

   Here's what the program should do:

   - Display the available products and their prices.
   - Prompt the user to select a product.
   - Prompt the user to insert coins until the total amount is sufficient for the chosen product.
   - Dispense the product and return any change.
   - Ask the user if they want to make another selection.

   Write a C++ program that implements this vending machine using nested **while** loops. Ensure that the program handles invalid inputs and provides clear prompts to guide the user through the selection and purchase process. Your program should have a user-friendly interface and gracefully handle both successful purchases and insufficient funds scenarios.

Hint:

To create the vending machine program with nested loops, consider using a do-while loop as the outer loop. This type of loop ensures that the program will run at least once, which is useful for greeting the user and prompting them to make selections.