**PSUEDOCODE:**

BEGIN VendingMachineSimulation

DISPLAY welcome message

INITIALIZE total\_money = 0

LOOP until user enters 0

DISPLAY "Insert currency options: 1c, 5c, 10c, 25c, $1, $5, or 0 to stop"

GET user input as deposit

IF deposit == 0 THEN

BREAK loop

ELSE

ADD deposit to total\_money

DISPLAY total money deposited

IF total\_money == 0 THEN

DISPLAY "No money inserted, exiting..."

EXIT program

INITIALIZE item\_prices as dictionary with product prices

LOOP up to 5 attempts OR until successful purchase

DISPLAY item menu with numbers 1-5 and prices

GET user input as item\_selection

IF item\_selection == 0 THEN

DISPLAY "Transaction cancelled"

CALL ReturnChange(total\_money)

EXIT program

ENDIF

GET item price from item\_prices[item\_selection]

IF total\_money >= item\_price THEN

SUBTRACT item\_price from total\_money

DISPLAY "Item dispensed"

CALL ReturnChange(total\_money)

EXIT program

ELSE

DISPLAY "Insufficient funds. Please try again."

ENDIF

END LOOP

DISPLAY "Maximum attempts reached"

CALL ReturnChange(total\_money)

END VendingMachineSimulation

FUNCTION ReturnChange(amount)

INITIALIZE coins as [25, 10, 5, 1]

INITIALIZE change\_distribution as empty list

FOR coin in coins

WHILE amount >= coin

ADD coin to change\_distribution

SUBTRACT coin from amount

DISPLAY change\_distribution

END FUNCTION

**TEST RUNS:  
A screenshot of a computer

Description automatically generated**

**A screenshot of a computer

Description automatically generated**

**A screenshot of a computer

Description automatically generated**