

#### Problem 4: Grocery Assistance/ Calculator

##### IPO

Input	Process	Output
<ul style="list-style-type: none"><li>• How much money Mr. Bhoola has today to buy fruits and vegetables (original amount).</li><li>• The prices of the onions, apricots, grapes, and tomatoes at the market.</li><li>• What vegetables Mr. Bhoola buys and how many of each.</li></ul>	<p>Multiply the quantity of each item Mr. Bhoola buys with the price of that item. Then add all the prices to get the Total amount he has to pay.</p> $\text{Change} = \text{Original amount} - \text{Total amount}$	How much Mr. Bhoola needs to pay and how much change he gets back.

##### PSEUDOCODE

Start

// Input

    m (money mr. bhoola has)

    // Prices

    p\_o (prices of the onions in Rs)

    p\_a (prices of the apricots in Rs)

    p\_g (prices of the grapes in Rs)

    p\_t (prices of the tomatoes in Rs)

    // Items purchased

    q\_o (quantity of the onions in Kg)

    q\_a (quantity of the apricots in Kg)

    q\_g (quantity of the grapes in Kg)

    q\_t (quantity of the tomatoes in Kg)

// Process

    // Total price (t\_c)

$t\_c = (p\_o * q\_o) + (p\_a * q\_a) + (p\_g * q\_g) + (p\_t * q\_t)$

    // Change (c)

$c = m - t\_c$

// Output

    Print "Total cost is Rs" + t\_c

    If (c >= 0)

        Print "Change to be returned is Rs" + c

    Else

        Print: "Not enough money. Need Rs" + (-c) + " more."

End