**Tutorial 4 Question 9**

Planning document for problem analysis

**Question**

1. a) Calculate the Cost of a product given the formula Cost = Quantity multiplied Unit Price and Total Cost is given by the formula Total Cost = Cost multiplied by 0.125 plus Cost. Input the Quantity and the Unit Price until a rogue Quantity of -99 is entered.

b) Modify the solution to ques 9a so that it also prints out the sum of all the Total Costs calculated.

**Input**

|  |  |  |
| --- | --- | --- |
| *variableName* | *type* | *availability* |
| quantity | integer | User - keyboard - until -99 entered |
| unitPrice | float | User - keyboard |

**Constants**

gst 🡨 0.125

**Output**

|  |  |  |
| --- | --- | --- |
| *variableName* | *format* | *where* |
| cost | Currency 2dp | Screen for each item |
| totalCost | Screen for each item |
| totalCostSum | Screen after all data entered |

**Calculations required**

cost 🡨 quantity \* unitPrice

totalCost 🡨 cost \*gst + cost

totalCost Sum 🡨 statements for sum

**Testing Plan**

***Version 1***

*# enter data and check input*

Ask user for quantity

Repeat until quantity is -99

Ask user for unit price

#processing

Ask user for quantity (- 99 to quit)

***Version 2***

*# enter data and check input*

*#add in the calculations*

Ask user for quantity

Repeat until quantity is -99

Ask user for unit price

#processing

cost 🡨 quantity \* unitPrice

totalCost 🡨 cost \*gst + cost

display cost and totalCost

Ask user for quantity (- 99 to quit)

***Version 3***

*# enter data and check input*

*# add in the calculations*

*# add in code for totalCostSum*

Ask user for quantity

**Sum 🡨 0**

Repeat until quantity is -99

Ask user for unit price

#processing

cost 🡨 quantity \* unitPrice

totalCost 🡨 cost \*gst + cost

display cost and totalCost

**sum 🡨 sum + totalCost**

Ask user for quantity (- 99 to quit)

**Display sum**

***Version 4***

Refine program if necessary