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IT 106 003

Assignment 1

Defining Diagram

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| num\_words  font | Prompt for a number of words  Get number of words  Calculate total cost  Calculate amount after tax  Print customer details | Num\_words  font  total\_price\_nonetax  Error\_messge\_minimum  error\_message\_zero\_negative  grand\_total  total\_sales\_tax |

Solution Diagram

CALCULATE\_SINGS\_TOTAL

1 Prompt user for num\_words

2 Read num\_words

3 Set total\_price\_notax to zero

4 Set sales\_tax = 0.06, error\_message\_minimum to blank, error\_message\_number\_words to blank, surcharge = 10.60

5 IF num\_words > 0 THEN

Prompt user for font

Read font

IF num\_words < 5 and num\_words >= 1 THEN

IF font = ‘Cosmic Sans’ THEN

total\_price\_notax = 93.24 + surcharge

ELSE

IF font = “Arial’ THEN

error\_message\_minimum = ‘Error! Your total price before a sales tax should exceed $106.06.’

Print = error\_message\_minimum

ENDIF

ENDIF

ENDIF

IF num\_words < 10 AND num\_words >=5 THEN

IF font = ‘Cosmic Sans’ THEN

total\_price\_notax = 102.72 +subtotal

ELSE

IF font = ‘Arial’ THEN

total\_price\_notax = 102.72

ENDIF

ENDIF

ENDIF

IF num\_words >= 10 THEN

IF font = ‘Comic Sans’ THEN

total\_price\_notax = 107.16 + surcharge

ELSE

IF font = ‘Arial’ THEN

total\_price\_notax = 107.16

ENDIF

ENDIF

ENDIF

ELSE

Set error\_message\_zero\_negative = ‘Error! Please type a number more than zero.’

ENDIF

6 set total\_sales\_tax = (total\_price\_notax \* sales\_tax)

7 set grand\_total = total\_price\_notax + total\_sales\_tax

8 print num\_words, font, total\_price\_notax, total\_sales\_tax, grand\_total

END

Input Test Data

|  |  |  |
| --- | --- | --- |
|  | First data set | Second data set |
| num\_words | 7 | 14 |
| font | Arial | Comic Sans |

Expected Result

|  |  |  |
| --- | --- | --- |
|  | First data set | Second data set |
| num\_words | 7 | 14 |
| Font | Arial | Comic Sans |
| total\_sales\_tax | 6.16 | 7.07 |
| total\_price\_notax | 102.72 | 117.76 |
| grand\_total | 108.88 | 124.83 |

Desk Checking Table

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Num\_  words | font | Error\_  messge\_  minimum | Sales  \_tax | Error\_message\_  Zero\_negative | Total\_sales  \_tax | Total\_price  \_notax | Grand  \_total | Surc  harge |
| 1st |  | | | | | | | | |
| 1 | 7 |  |  |  |  |  |  |  |  |
| 2 | 7 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  | 0 |  |  |
| 4 |  |  | blank | 0.06 | blank |  |  |  | 10.60 |
| 5 | 7 | Arial |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  | 6.16 |  |  |  |
| 7 |  |  |  |  |  |  |  | 108.88 |  |
| 8 | 7 | Arial |  |  |  | 6.16 | 102.72 | 108.88 |  |
| 2nd |  | | | | | | | | |
| 1 | 14 |  |  |  |  |  |  |  |  |
| 2 | 14 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  | 0 |  |  |
| 4 |  |  | blank | 0.06 | blank |  |  |  | 10.60 |
| 5 | 14 | Comic  Sans |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  | 7.07 |  |  |  |
| 7 |  |  |  |  |  |  |  | 124.84 |  |
| 8 | 14 | Comic  Sans |  |  |  | 7.07 | 117.76 | 124.84 |  |