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C1500-01

Assignment 01

9/7/14

**Problem #1**

Variable(s) Required:

*miles* (float)-> stores how many miles user wants to run

*laps* (float) -> stores the amount of laps required to reach miles

Pseudocode Solution:

Prompt “How many miles would you like to run?”

Store input as *miles*

Assign *miles* \* (1/14) to *laps*

Display “To complete *[miles]* you need to run *[laps]* laps around the track.”

**Problem #2**

Variable(s) Required:

*l, w, h* (int) -> stores user input for length, width, and height of the box

*area* (int) -> stores the calculated surface area of the box

*volume* (int) -> stores the calculated volume of the box

Pseudocode Solution:

Prompt “What is the length, width, and height of the box (in inches)?”

Store user input to variables *l*, *w*, *h*

Assign *area* to 2(l\*w + l\*h + w\*h)

Assign *volume* to *l\*w\*h*

Display “Box surface area = *[area]* square inches”

Display “Box volume = *[volume]* cubic inches”

**Problem #3**

Variable(s) Required:

*quarters*, *dimes*, *nickels*, *pennies* (int) -> stores user input for amount of quarters, dimes, nickels, and pennies

*total* (float) -> stores the total amount of money from all of the change

Pseudocode Solution:

For *quarters*, *dimes*, *nickels*, and *pennies*

Prompt “Enter number of *[quarters, dimes, nickels, pennies]*”

Assign *total* = *quarters*\*0.25 + *dimes*\*0.1 + *nickels*\*0.05 + *pennies*\*0.01

Display “*[quarters]* quarters, *[dimes]* dimes, *[nickels]* nickels, and *[pennies]* pennies = *[total]*.”

**Problem #4**

Variable(s) Required:

*feet* (float) -> stores number of feet the user wants converted

*yards*, *inches*, *cm*, *meters* (float) -> stores calculated conversion for each unit

Pseudocode Solution:

Prompt “Enter number of feet:”

Stores input to *feet*

Assign *yards* to *feet* / 3

Assign *inches* to *feet* \* 12

Assign *cm* to *inches* \* 2.54

Assign *meters* to *cm* / 100

Display “= *[yards]* yards”

Display “= *[inches]* inches”

Display “= *[cm]* cm”

Display “= *[meters]* meters”

**Problem #5**

Variable(s) Required:

*ounces* (int) -> stores user input of ounces

*quarts* (int) -> stores calculated conversion of ounces to whole quarts

*remainder* (int) -> stores remainder ounces after converting to quarts

Pseudocode Solution:

Prompt “How many ounces would you like to convert?”

Store input to *ounces*

Assign *quarts* to *ounces* // 32

Assign *remainder* to *ounces* % 32

Display “*[ounces]* oz. = *[quarts]* qt. *{remainder]* oz.”