

# From A to B

## CCPROG1 Coursework 3

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Complete the given template and fill up the answers. There are five functions to complete.

Template:

<https://drive.google.com/file/d/1FDo8NtmYR0Py3FApE-E9Vu5TBOT5Il9y/view?usp=sharing>

### **convertStickToOunce**

This function takes in a weight measure of sticks and returns the measure in Ounces. Use the following conversion equation:

$$1 \text{ Stick} = 4.056506 \text{ Ounces}$$

### **convertUSDToSGD**

This function takes in a unit of US dollars and converts it into Singapore dollars. Instead of returning the value, modify the parameter and feed the resulting value there. For conversion, use the following exchange rate:

$$1.0 \text{ SGD} = 0.693830742 \text{ USD}$$

### **convertGoldToPHP**

This function takes in a measure of gold in ounces and a cash value and will compute the equivalent value of the gold in PHP. The function returns the amount in PHP of the conversion. The function also modifies the cash value and will add the converted gold's value. However, a service fee of 500 PHP is charged when converting regardless of the weight converted. The service charge only reflects the cash parameter and the return value does not take into consideration the service charge. The conversion rate for gold is as follows:

$$1 \text{ ounce} = 96'312 \text{ PHP.}$$

### **convertFruitToJuice**

This function takes in a measure of oranges and mangoes in pounds and determines how many cups of juice is made. **For every 5 lbs of oranges, a cup of juice is made. Also, a cup of juice can also be made with 3 lbs of mangoes.** The conversion also requires juices to be pure, meaning a fraction of a cup of juice will not be acceptable and combining juices is not allowed. This means that 4 lbs oranges and 2 lbs mangoes will not produce a cup of juice.

### **convertMetalToToys**

This function takes in a measure of metal in lbs and converts them into toys. **For every 2 lbs of metal, a toy can be made.** When creating toys, extra shavings are left over. The amount of savings for **every 6 toys can be made into an additional toy.** The additional toys do not produce shavings when made. The function returns the number of toys that can be made in total.

## Compile Instructions

- To compile this file:
  - `gcc cw3Ans.c cw3.c -o run.exe`
- To run this file using the input files:
  - `run.exe < cw3-in1.txt`
  - `run.exe < cw3-in2.txt`

## Submission Details

Additional instructions regarding the deliverable:

- Do not use any external libraries. Only use `stdio.h` as the import.
- There is no need for more advanced coding constructs like conditions and loops.
- **Do not modify the function header.** Any modification will result in a wrong submission for that question. This means keeping the function name, the parameters used and its return type.
- To test if the function works, run the program given the inputs as shown in the sample runs.
- In the canvas submission, **only submit the cw3Ans.c file.**
  - There is no need to modify the main.

## Sample Runs

In the samples, the green text shows user inputs.

Input stick : <b>20.5</b> Output stone: 83.16  Input USD : <b>13.2</b> Output SGD : 19.02  Input gold : <b>0.0001</b> Input cash : <b>500</b> Converted : 9.63 Output cash : 9.63  Input orange: <b>30</b> Input mango : <b>25</b> Output cups : 14  Input metal : <b>18</b> Output toys : 10	Input stick : <b>2.5</b> Output stone: 10.14  Input USD : <b>2.5</b> Output SGD : 3.60  Input gold : <b>0.5</b> Input cash : <b>-40000</b> Converted : 48156.00 Output cash : 7656.00  Input orange: <b>2.5</b> Input mango : <b>5.5</b> Output cups : 1  Input metal : <b>12</b> Output toys : 7
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## Submission Details

- Do not modify any other file.
- Submit the results into the canvas page:
  - <https://dlsu.instructure.com/>
  - Go to: Assignments > Course Activities: Homework > CW3: A to B
- This activity is worth 20 points
- Deadline: Oct 5, 2022 11:59 PM