COLLEGE OF ENGINERING AND COMPUTER STUDIES

PERFORMANCE TASK 2

[Conversion App using functions]

Subject Code / Description

CPFL –
Computer Programming Fundamentals Lab

Submitted By
Villegas, Mike Luis L.

Course & Section
BSCS 1-1

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I. INTRODUCTION

A. Problem Description
Debugging codes

B. Objectives
To improve the usage of void functions and functions with parameters.

II. CONCEPTUAL FRAMEWORK

INPUT	PROCESS	OUTPUT
ch	`cin >> ch;`	ch
dollar	`cin >> dollarsIn;`	dollar
peso	`cin >> pesoIn;`	peso

promtAndwait();	`void promptAndWait()`
	`{`
	`  cin.ignore(100, '\n');`
	`  cout << "\nPress Enter to continue...";`
	`  cin.get();`
	`}`
		promtAndwait();

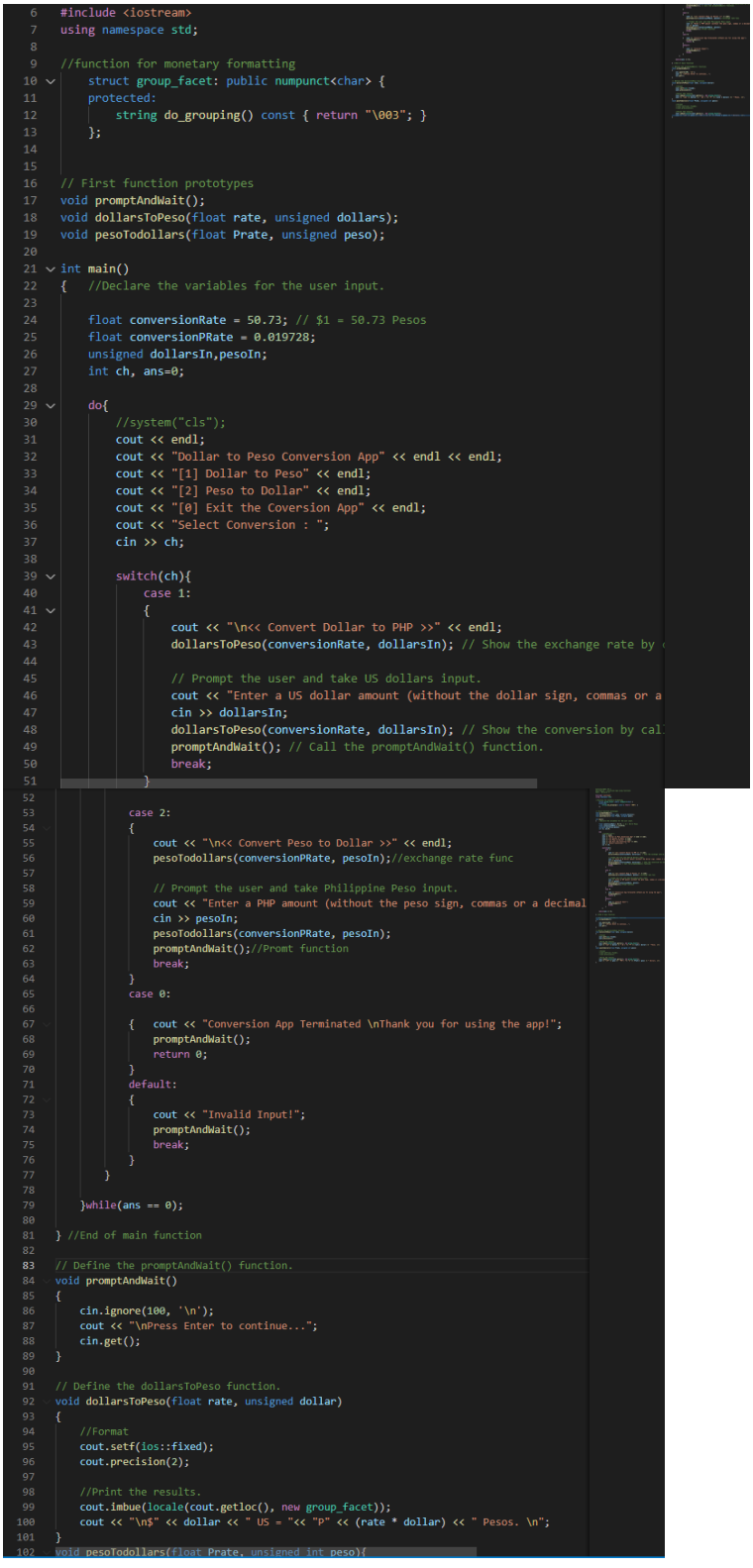
dollarsTopeso	`void dollarsToPeso(float rate, unsigned dollar)`
	`{`
	`  //Format`
	`  cout.setf(ios::fixed);`
	`  cout.precision(2);`
	
	`  //Print the results.`
		dollarsTopeso

	`cout.imbue(locale(cout.getloc(), new group_facet));`
	`cout << "\n$" << dollar << " US = "<< "P" << (rate * dollar) << " Pesos. \n";`
	`}`	

pesoTodollars	`void pesoTodollars(float Prate, unsigned int peso){`
	
	`//Format`
	`//cout.setf(ios::fixed);`
	`//cout.precision(1);`
	
	`//Print the results.`
	`cout.imbue(locale(cout.getloc(), new group_facet));`
	`cout << "\nP" << peso << " PHP = "<< "$" << (Prate * peso) << " Dollars. \n";`
	`}`
		pesoTodollars

III. I/O SCREEN SHOTS

Input:



```
#include <iostream>
using namespace std;

//function for monetary formatting
    struct group_facet: public numpunct<char> {
    protected:
        string do_grouping() const { return "\003"; }
    };


// First function prototypes
void promptAndWait();
void dollarsToPeso(float rate, unsigned dollars);
void pesoTodollars(float Prate, unsigned peso);

int main()
{   //Declare the variables for the user input.

    float conversionRate = 50.73; // $1 = 50.73 Pesos
    float conversionPRate = 0.019728;
    unsigned dollarsIn,pesoIn;
    int ch, ans=0;

    do{
        //system("cls");
        cout << endl;
        cout << "Dollar to Peso Conversion App" << endl << endl;
        cout << "[1] Dollar to Peso" << endl;
        cout << "[2] Peso to Dollar" << endl;
        cout << "[0] Exit the Coversion App" << endl;
        cout << "Select Conversion : ";
        cin >> ch;

        switch(ch){
            case 1:
            {
                cout << "\n<< Convert Dollar to PHP >>" << endl;
                dollarsToPeso(conversionRate, dollarsIn); // Show the exchange rate by

                // Prompt the user and take US dollars input.
                cout << "Enter a US dollar amount (without the dollar sign, commas or a
                cin >> dollarsIn;
                dollarsToPeso(conversionRate, dollarsIn); // Show the conversion by cal
                promptAndWait(); // Call the promptAndWait() function.
                break;
            }

            case 2:
            {
                cout << "\n<< Convert Peso to Dollar >>" << endl;
                pesoTodollars(conversionPRate, pesoIn);//exchange rate func

                // Prompt the user and take Philippine Peso input.
                cout << "Enter a PHP amount (without the peso sign, commas or a decimal
                cin >> pesoIn;
                pesoTodollars(conversionPRate, pesoIn);
                promptAndWait();//Promt function
                break;
            }
            case 0:

            {   cout << "Conversion App Terminated \nThank you for using the app!";
                promptAndWait();
                return 0;
            }
            default:
            {
                cout << "Invalid Input!";
                promptAndWait();
                break;
            }
        }

    }while(ans == 0);

} //End of main function

// Define the promptAndWait() function.
void promptAndWait()
{
    cin.ignore(100, '\n');
    cout << "\nPress Enter to continue...";
    cin.get();
}

// Define the dollarsToPeso function.
void dollarsToPeso(float rate, unsigned dollar)
{
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);

    //Print the results.
    cout.imbue(locale(cout.getloc(), new group_facet));
    cout << "\n$" << dollar << " US = "<< "P" << (rate * dollar) << " Pesos. \n";
}
void pesoTodollars(float Prate, unsigned int peso){
```

```
103
104     //Format
105     //cout.setf(ios::fixed);
106     //cout.precision(1);
107
108     //Print the results.
109     cout.imbue(locale(cout.getloc(), new group_facet));
110     cout << "\nP" << peso << " PHP = "<< "$" << (Prate * peso) << " Dollars. \n";
111 }
```

Output:

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE                                Code

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\63997\Downloads\LPU\CPF - LAB\Activities> cd "c:\Users\63997\Downloads\LPU\CPF - LAB\Activitie
s\" ; if ($?) { g++ cpfl_PT2.cpp -o cpfl_PT2 } ; if ($?) { .\cpfl_PT2 }

Dollar to Peso Conversion App

[1] Dollar to Peso
[2] Peso to Dollar
[0] Exit the Coversion App
Select Conversion : 1

<< Convert Dollar to PHP >>

$12,850,128 US = P651,886,976.00 Pesos.
Enter a US dollar amount (without the dollar sign, commas or a decimal) : 500

$500 US = P25,365.00 Pesos.

Press Enter to continue...

Dollar to Peso Conversion App

[1] Dollar to Peso
[2] Peso to Dollar
[0] Exit the Coversion App
Select Conversion : 2

<< Convert Peso to Dollar >>

P0 PHP = $0.00 Dollars.
Enter a PHP amount (without the peso sign, commas or a decimal : 5000

P5,000 PHP = $98.64 Dollars.

Press Enter to continue...

Dollar to Peso Conversion App

[1] Dollar to Peso
[2] Peso to Dollar
[0] Exit the Coversion App
Select Conversion : 0
Conversion App Terminated
Thank you for using the app!
Press Enter to continue...
PS C:\Users\63997\Downloads\LPU\CPF - LAB\Activities>

Ln 83, Col 40  Spaces: 4  UTF-8  CRLF  C++  Win32
```

IV. PROGRAM SOURCE CODE (Main Logic Only)

SWITCH STATEMENT LOGIC

```
        switch(ch){
            case 1:
            {
                cout << "\n<< Convert Dollar to PHP >>" << endl;
                dollarsToPeso(conversionRate, dollarsIn); // Show the
exchange rate by calling the function.

                // Prompt the user and take US dollars input.
                cout << "Enter a US dollar amount (without the dollar
sign, commas or a decimal) : ";
                cin >> dollarsIn;
                dollarsToPeso(conversionRate, dollarsIn); // Show the
conversion by calling the function.
                promptAndWait(); // Call the promptAndWait() function.
                break;
            }

            case 2:
            {
                cout << "\n<< Convert Peso to Dollar >>" << endl;
                pesoTodollars(conversionPRate, pesoIn);//exchange rate
func

                // Prompt the user and take Philippine Peso input.
                cout << "Enter a PHP amount (without the peso sign, commas
or a decimal : ";
                cin >> pesoIn;
                pesoTodollars(conversionPRate, pesoIn);
                promptAndWait();//Promt function
                break;
            }
            case 0:

            {   cout << "Conversion App Terminated \nThank you for using
the app!";
                promptAndWait();
                return 0;
            }
            default:
```

```
            {
                cout << "Invalid Input!";
                promptAndWait();
                break;
            }
        }
```

FUNCTION LOGIC

```
void promptAndWait()
{
    cin.ignore(100, '\n');
    cout << "\nPress Enter to continue...";
    cin.get();
}

// Define the dollarsToPeso function.
void dollarsToPeso(float rate, unsigned dollar)
{
    //Format
    cout.setf(ios::fixed);
    cout.precision(2);

    //Print the results.
    cout.imbue(locale(cout.getloc(), new group_facet));
    cout << "\n$" << dollar << " US = "<< "P" << (rate * dollar) << "
Pesos. \n";
}
void pesoTodollars(float Prate, unsigned int peso){

    //Format
    //cout.setf(ios::fixed);
    //cout.precision(1);

    //Print the results.
    cout.imbue(locale(cout.getloc(), new group_facet));
    cout << "\nP" << peso << " PHP = "<< "$" << (Prate * peso) << "
Dollars. \n";
}
```

V. GitHub ACTIVITY LINK

https://github.com/MikeVillegas00/Activities/blob/master/cpfl_PT2.cpp

VI. LEARNING OUTCOMES

With the help of OE 5 I understand the usage of void functions

VII. REFERENCES

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1. What are the functions that converts currency and display the exchange rate?
   Void dollarsToPeso(float rate, unsigned dollar)
   Void pesoTodollars (float Prate, unsigned peso)

2. Enumerate all the formal parameters in all your defined functions?
   float Prate, unsigned int peso
   float rate, unsigned dollar
   dollarsTopeso(conversionRate, dollarsIn)
   pesoTodollars(conversionPrate,pesoIn)

3. What is the main purpose of the promptAndAwait() function? Explain.
   Purpose of promtAndwait is to pause the program after using one of the exchange functions.

4. What were the line of codes and function that formats currency to a proper output monetary unit?
   Struct group_facet: public numpunct<char>{
   protected:
   string do grouping() const {return "\003";}
   };
5. What is the purpose of the do-while loop?
   For the program to be looped.

6. How do you find this debugging Performance Task activity?
   For me this is more effective in learning the implementations of the code discussed.