**Chapter 2 Classwork**

#1

Maria Guerra needs a program that calculates and displays the volume of a rectangular pool. Complete an IPO chart for this problem, and solve the program.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Length, width, height | 1. Declare all variables 2. Get Input Variable values 3. Process Volume = length\*width\*height 4. display | Volume |

//Dylan Nguyen, 8/25/20, ch2cw\_1

#include <iostream>

using namespace std;

int main()

{

// declare variables

double length, width, height, volume;

//get input values

cout << "Enter length:\n";

cin >> length;

cout << "Enter width:\n";

cin >> width;

cout << "Enter height:\n";

cin >> height;

//process- calculate volume

volume = length \* width \* height;

//display

cout << "The volume of the pool is " << volume << endl;

system("pause");

return 0;

}

#2

Justin Fernandez needs a program that calculates and displays the amount he should tip a waiter at a restaurant.  The program should prompt the user to enter a tip percentage then calculate the tip. Complete an IPO chart for this problem, and solve the program.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| totalBill  tipPercentage | 1. Declare all variables 2. Get input values for the input variables 3. Calculate the output tip = tipPercentage \* totalBill 4. Display output | tip |

//Dylan Nguyen, 8/25/20, ch2cw\_2

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

double totalBill, tipPercentage, tip;

cout << "Enter the total bill: \n";

cin >> totalBill;

cout << "Enter the tip percentage: \n";

cin >> tipPercentage;

tip = tipPercentage \* totalBill;

cout << fixed << setprecision(2);

cout << "Tip amount: $" << tip << endl;

system("pause");

return 0;

}

#3

Javier Alvarez needs a program that calculates and display the sum of any two numbers, entered by the user. Complete an IPO chart for this problem, and solve the program.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| firstNumber  secondNumber | 1. Declare variables 2. Get input values for firstNumber and secondNumber 3. Calculate the sum sumNumber = firstNumber + secondNumber 4. Display output | sumNumber |

#include <iostream>

using namespace std;

int main()

{

double firstNumber, secondNumber, sumNumber;

cout << "Enter Number 1:\n";

cin >> firstNumber;

cout << "Enter Number 2:\n";

cin >> secondNumber;

sumNumber = firstNumber + secondNumber;

cout << firstNumber << " + " << secondNumber << " = " << sumNumber << endl;

system("pause");

return 0;

}