**C++ Examples from Homework:**

// main.cpp

// Two rectangle comparison

// Created by ANDRIS PINKHASIK on 9/15/14.

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/\* This program will ask for length & width of 2 rectangles. The program will tell

 the user which rectangle has the greater area or if areas are the same. \*/

#include <iostream>

using namespace std;

int main()

{

 double rectangle1\_length, rectangle1\_width, rectangle2\_length, rectangle2\_width;

 int rectangle1\_area;

 cout << "Enter the length for rectangle1: ";

 cin >> rectangle1\_length;

 cout << "Enter the width for rectangle1: ";

 cin >> rectangle1\_width;

 rectangle1\_area = rectangle1\_length \* rectangle1\_width;

 cout << "area of rectangle1 is " << rectangle1\_area << endl;

 int rectangle2\_area;

 cout << "Enter the length for rectangle2: ";

 cin >> rectangle2\_length;

 cout << "Enter the width for rectangle2: ";

 cin >> rectangle2\_width;

 rectangle2\_area = rectangle2\_length \* rectangle2\_width;

 cout << "The area of rectangle2 is " << rectangle2\_area << endl;

 if ( rectangle1\_area > rectangle2\_area)

 {

 cout << "The area of rectangle1 is greater than rectangle2\n";

 }

 else if( rectangle1\_area < rectangle2\_area)

 {

 cout << "The area of rectangle2 is greater than rectangle1\n";

 }

 if ( rectangle1\_area == rectangle2\_area)

 {

 cout << "Both areas are equal\n";

 }

 else

 {

 cout << "This is the end of the game\n";

 }

}

// main.cpp

/\* Rainfall - This programm will ask the user to enter the amount of rainfall for each month.

 The program will calculate the total, average, highest, and lowest rainfall for the year.\*/

// Created by ANDRIS PINKHASIK on 11/17/14.

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#include <iostream>

#include <string>

using namespace std;

double sumRainfall(double[], int);

double highMonth(double[], int);

double lowMonth(double[], int);

int main()

{

 const int Num\_Months = 12;

 double total, highest, lowest, average;

 string name[Num\_Months] = {"January", "February", "March", "April","May",

 "June", "July", "August", "September", "October", "November", "December"};

 double rainfall[Num\_Months] = {};

 for(int month = 0; month < Num\_Months;month++)

 {

 cout << "The rainfall for the month of " << name[month] << ":";

 cin >> rainfall[month];

 }

 total = sumRainfall(rainfall, Num\_Months);

 average = total/ Num\_Months;

 highest = highMonth(rainfall, Num\_Months);

 lowest = lowMonth(rainfall, Num\_Months);

 cout << "The total rainfall for the year is: ";

 cout << "\t" << total << endl;

 cout << "The average rainfall for the year is: ";

 cout << "\t" << average << endl;

 cout << "The highest amount of rainfall in a month is: ";

 cout << "\t" << highest << endl;

 cout << "The lowest amount of rainfall in a month is: ";

 cout << "\t" << lowest << endl;

 return 0;

}

double sumRainfall( double array[], int size)

{

 double total = 0.0;

 for (int count = 0; count < size;count++)

 {

 total = total + array[count];

 }

 return total;

}

double highMonth(double array[], int size)

{

 double highest = array[0];

 for (int count = 1; count < size; count++)

 {

 if (array[count] > highest)

 {

 highest = array[count];

 }

 }

 return highest;

}

double lowMonth(double array[], int size)

{

 double lowest = array[0];

 for (int count = 1; count < size; count++)

 {

 if (array[count] < lowest)

 {

 lowest = array[count];

 }

 }

 return lowest;

}

// main.cpp

// Mortgage paymentk

// Created by ANDRIS PINKHASIK on 9/11/14.

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/\* Program will calculate customer's monthly costs for various expenses. It will also display the annual expense. \*/

#include <iostream>

using namespace std;

int main()

{

 int monthly\_expense;

 int annual\_expense;

 double rent, utilities, phones, cable;

 // Input rent payment

 cout << "Hello, input your monthly rent:";

 cin >> rent;

 // Input utilities payment

 cout << "Input your utilities payment:";

 cin >> utilities;

 // Input phones payment

 cout << "Input your phone payment:";

 cin >> phones;

 // Input cable payment

 cout << "Input your cable payment:";

 cin >> cable;

 monthly\_expense = rent + utilities + phones + cable;

 annual\_expense = monthly\_expense \* 12;

 cout << "Your monthly expenses are:" << monthly\_expense << endl;

 cout << "Your annual expenses are:" << annual\_expense << endl;

 return 0;

}

// main.cpp

// MarkupHw

/\* Program will ask user to enter item's wholesale cost and markup value. The Program will use a function to calculate the retail price of the item.\*/

// Created by ANDRIS PINKHASIK on 10/23/14.

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#include <iostream>

double calculateRetail (double, double);

int main()

{

 using namespace std;

 cout << "Please enter a wholeSale value: ";

 double wholeSale;

 cin >> wholeSale;

 cout << "Please enter a markUp value: ";

 double markUp;

 cin >> markUp;

 double totalCost;

 if ( wholeSale > 0 && markUp > 0)

 {

 totalCost= calculateRetail(wholeSale, markUp);

 cout << "The total cost of the item is " << totalCost << endl;

 }

 else

 {

 cout << "A positive value is required ";

 }

 return 0;

}

double calculateRetail(double wholeSale, double markUp)

{

 return (wholeSale \* (markUp/100) + wholeSale);

}

// TenValueArray

/\* Program will allow user to enter 10 integervalues into array.

 The program will display the maximum and minimum numbers stored

 in array.\*/

// Created by ANDRIS PINKHASIK on 11/13/14.

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#include <iostream>

using namespace std;

int main()

{

 const int integers = 10;

 int Ten[integers];

 int maximum , minimum;

 cout << "It will prompt you to enter values into array. \n";

 for (int i = 0;i < 10;i++)

 {

 cout << "Enter value please: ";

 cin >> Ten[i];

 }

 maximum = Ten[0];

 minimum = Ten[0];

 for (int i =1; i< 10; i++)

 {

 if ( minimum > Ten[i])

 {

 minimum = Ten[i];

 }

 else if (maximum < Ten[i])

 {

 maximum = Ten[i];

 }

 }

 cout << "\nThis is the max number: " << maximum << endl;

 cout << "This is the min number: " << minimum << endl;

 return 0;

}