**CIS 252 - Exam 1 – Part 2 – Advanced C++ Programming**

**Instructions**

**This section is worth 4 points on your grade.**

* Save a private copy of this file (“Save As” function) in your personal directory or flash drive as a Word file with the filename

**CIS\_252\_T1\_firstname\_lastname.doc(x)**

* Click on the Insert tab in MS Word, find the “Header and Footer” group and click on the Footer button. Select the first footer option, which will put you in the footer. Type the filename in the footer, then double-click back into the text.
* You can type in the answers now and then print or print your private copy and fill in the answers by hand.

**Short Answer 1 – 9 (4 points each).** Answer any six. You can answer the rest for possible bonus points(up to 4 per question) Just please designate which ones you are doing for bonus so they don’t count against you if wrong.

**I choose 1-6 to be graded!**

1. Write the statement to declare and initialize a one-dimensional int array named scores that has 10 elements. Then write the statement to store the number 12 in the third element of the array.  
   int scores[10]=0;

scores[2]=12;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Write the code to display the contents of the scores array from number 1 above. Use the for statement with a counter variable named x.  
   \_\_for(int x=0; x<10; x++)

cout << scores[x] << “ “;

cout << endl;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What will the resulting output show if I try to print out the values of the array called names by using the statement  
   cout << names << endl;

It will only output the first element of the array. The base location.  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Write a single line of code to assign the value 1.67 to element 9 of array temp.  
   temp[8]=1.67;  
   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the value of num[3] Given the statements   
    num[9] = 40

num[4] = 37

num[3] = num[9] – num[4];

\_\_3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Type a line of code that would assign the value of 89.75 to row number seven and column number five of a two-dimensional array named prices.  
     
   \_\_\_prices[7][5]=89.75;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Suppose that I have the statements;

Char facultyName[25];

Char staffName[20];

Char yourName[20];

What would be the effect of me using the following statements.

Strcpy(facultyName, “Keith Bond”);

Strcpy(staffName, “John Doe”);

Strcpy(yourName, staffName);

\_\_Keith Bond will be stored in facultyName

John Doe will be stored in staffName and yourName\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Please give me a definition/description of parallel arrays.

**\_\_\_**arrays that utilize the same data**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Please initialize the two-dimensional array called wonder with four rows and four columns with the following rows of data as you are declaring it.

Components of the first row are 4, 6, 8, 10; the components of the second row are 44, 11, 4, 25; the components of the third row are 33, 20, 48, 29; and the components of the fourth row are 63, 17, 105, 57.

\_\_\_wonder[0][]={4,6,8,10};

wonder[1][]={44,11,4,25};

\_wonder[2][]={33,20,48,29};

wonder[3][]={63,17,105,57};\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Code comprehension** (12 points). Determine whether the following code fragments are missing code valid code or if the ones given contain errors. Where there is missing code, write it in, where there is an error, indicate the error and write the correction next to it. Where there is no error, write “no error”. There are supposed to be 22 lines of code including brackets. There are 11 lines of code with no errors

#include <iostream> //corrected

**using namespace std; //missing**

const int arraySize = 5; //corrected

int main() //missing

{ //missing

int item[arraySize];

int sum;

cout << "Enter five numbers: "; //corrected

sum = 0;

for (int counter = 0; counter < 5; counter++) //corrected

{

cin >> item[counter];

sum = sum + item[counter];

}

cout << endl;

cout << "The sum of the numbers is: " << sum << endl; //corrected

cout << “The numbers in reverse order are: "; //missing

for (int counter = 4; counter >= 0; counter--) //corrected

cout << item[counter] << " ";

cout << endl;

return 0; //missing

}

**Programming problem** (14 points)

Cut and paste the following code into a Dev-C++. This will create and fill an integer array. Modify this code in two ways.

output the contents of the array after initialization.

find and output the smallest and largest values of the array.

Make sure to have an initial documentation section in the program.

Put description comments by ALL of your code.

When you are finished and have a successful program (that both compiles and runs), submit the .cpp file to this assignment. File name should be,

**CIS251\_T1\_prog\_<first name\_last name>.cpp**

#include <cstdlib> // include STL

#include <iostream>

using namespace std;

int main(int argc, char \*argv[])

{

const int size = 20;

int sortme[size];

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

{

sortme[j] = rand();

}

}

system(“PAUSE”);

return 0;

}