**ASSIGNMENT REHOBOTH: DUE DATE FRIDAY 08/07/2022**

**Task 1**

The following program is written in **C** language. You are to change the syntax to **C++** and run it showing the outputs as screenshots. Experiment with the following simple program that illustrates the relationship between two integer variables, their corresponding addresses and their associated pointers. Examine your outputs:

*#include <stdio.h>*

*main( )*

*{*

*int u = 3;*

*int v;*

*int \*pu; /\* pointer to an integer \*/*

*int \*pv; /\* pointer to an integer \*/*

*pu = &u; /\* assign address of u to pu \*/*

*v = \*pu; / \* assign value of u to v \*/*

*pv = &v; /\* assign address of v to pv \*/*

*printf("\nu=%d &u=%X pu=%X \*pu=%d', u, &u, pu, \*pu);*

*printf("\n\nv=%d &v=%X pv=%x \*pv=%d", v, &v, pv, \*pv);*

*}*

**Task 2**

You are to; first, convert the following code to a complete C++ program. Study carefully and analyze the operation of the following program having a function named **enigma**. Interpret the intention of this program and provide the correct output generated: (You may be asked to present your understanding to the members of the class)

// pass by reference; strength in the use of pointers

int a, b;

int main()

{

int enigma(int \*x, int \*y);

a = 2;

b = 7;

enigma(&a, &b);

printf("\n results of a and b %d, %d", a, b);

}

int enigma(int \*x, int \*y)

{

\*y = \*y + b;

\*x = b + \*x;

b = \*x + b;

a = \*y;

}

**Task 3**

Understanding and implementing pointers is not as easy as the use of ordinary

variables, state in details your challenges in an attempt to master the use of pointers

and where you wish your instructor provide further clarifications:

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Task 4**

State the difference between delete[] and delete in C++?

**Task 5**

Answer the questions in the following code where comments are inserted:

#include <iostream>

using namespace std;

int main()

{

int arr[] = {4, 5, 6, 7};

int \*p = arr;

// write a C++ output statement to display the second elements of the array using pointer

// write a C++ output statement to add 3 to the 2nd elements of the array and display result

return 0;

}

*Good luck!*