

Polytechnic University of Puerto Rico
Electrical and Computer Engineering & Computer Science Department
CECS 2223 – Computer Programming I Lab

Lab 5

Name: Coral S. Schmidt Montilla ID#: 148830

1. Copy the source code developed for Lab 5 and paste it as **text** below. (15 points)

```
/*
 * CECS 2203, Computer Programming I Lab
 * Spring 2023, Sec. 06
 * Date: April 20, 2023
 * Topic: Lab 5 – Arrays
 * File name: lab05.cpp
 *
 * Complete the program by writing the correct C++ statements.
 *
 * Name: Coral S. Schmidt, YOUR ID# 148830
 */
// write the appropriate include statement
#include <iostream>

// write the appropriate using statement
using namespace std;

void personalInfo(); // method prototype

int main() {
    // Write the statement that declares a constant integer variable named
    CUANTOS
    // and initializes it to 5.
    const int CUANTOS = 5;

    // Write the statement that declares an integer array named numbers and
    // initializes all elements to 0. Use the constant as the size of the array.
    int numbers[CUANTOS] = {};

    // Call the srand method using the return value of the time method as
    argument
    // to seed the pseudo random number generator. Remember to cast the return
    // value of time to an unsigned int
    srand(static_cast <unsigned int> (time(NULL)));

    // Develop a for iteration control structure which assigns a random value to
    // each element of the array. The values to be assigned must be in the range
    // of 1 to 100. Use the rand method and a modulus operation to obtain the
    value.
    for (int i = 0; i < CUANTOS; i++) {
        numbers[i] = (rand() % 100) + 1;
    }

    // Print the phrase "The [quantity] values in the numbers array are: ", where
```

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```
// [quantity] is substituted for the size of the array. DO NOT include a
// new line after the phrase.
printf("The %i values in the numbers array are: ", CUANTOS);

// Develop a for iteration control structure which prints the contents of the
array.
// Print a comma after each value, except the last one which is followed by a
// period and the endl operator. For example, if the contents of the array
are
// 1, 2, 3, 4, and 5, this code will print the values as 1, 2, 3, 4, 5.

for (int i = 0; i < CUANTOS; i++) {

    printf("%i", numbers[i]);

    if (i != CUANTOS - 1)
        printf(", ");

    else
        printf(". \n");

}

// Write the statement that calls the personalInfo method
personalInfo();

system("pause"); // for Visual Studio only
return 0;
}

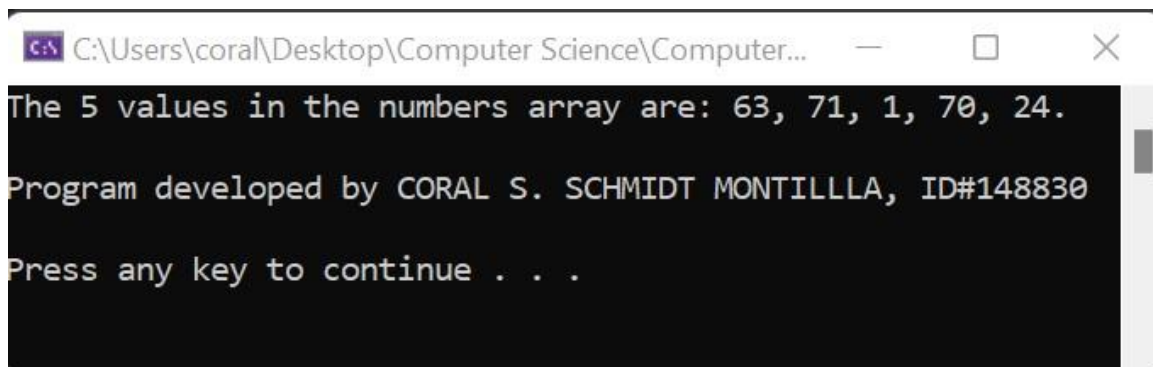
// Method definitions
// The personalInfo method has no parameters or return value. It prints the phrase
// "Program developed by [YOUR NAME], ID#[YOUR ID NUMBER]", where the square
brackets
// and the text within is substituted with your personal information. Make sure to
add
// a blank line before and after the phrase is printed.

void personalInfo() {

    cout << endl;
    cout << "Program developed by CORAL S. SCHMIDT MONTILLLA, ID#148830";
    cout << endl;
    cout << endl;
}
```

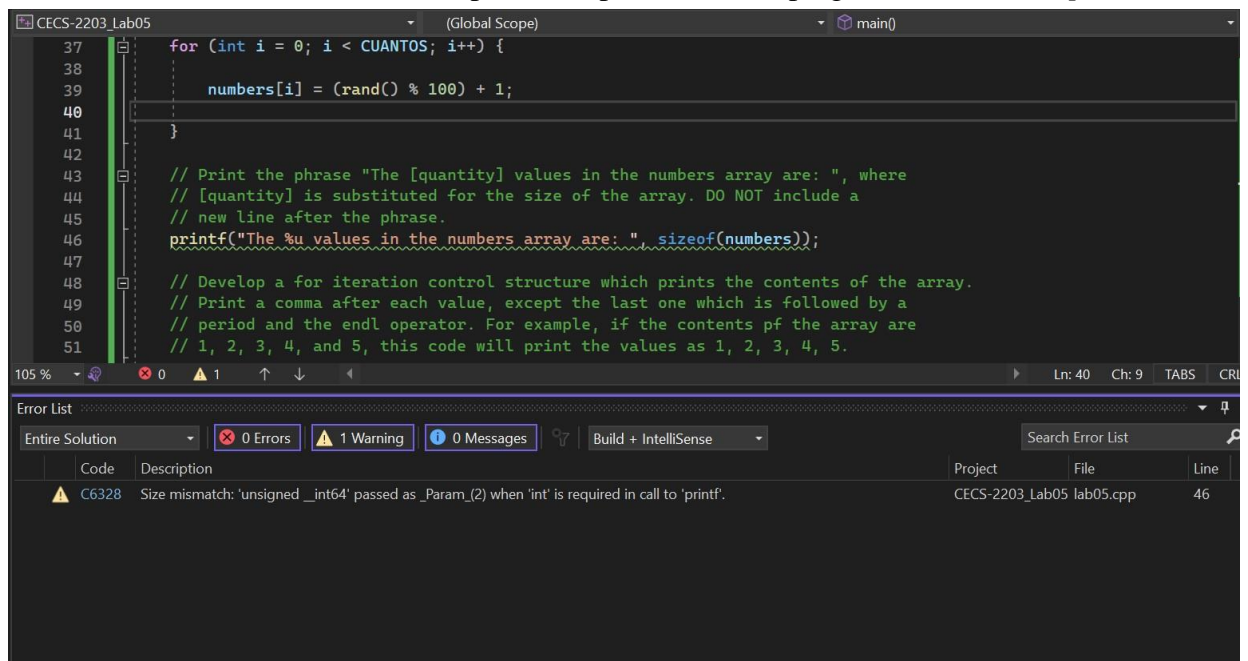
2. Paste the screenshots of the program's execution below. (5 points)

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A screenshot of a terminal window with a black background and white text. The text displays the output of a C++ program: "The 5 values in the numbers array are: 63, 71, 1, 70, 24.", followed by "Program developed by CORAL S. SCHMIDT MONTILLLA, ID#148830", and "Press any key to continue . . .". The window title bar shows the file path "C:\Users\coral\Desktop\Computer Science\Computer..." and standard window controls.

3. Comment on any warnings or errors revealed by Visual Studio. If any error messages were present, list the error and describe how you corrected it. If no errors or warnings were revealed, comment on the most important aspect of developing the solution. (5 points)



A screenshot of the Visual Studio IDE. The main editor shows a C++ file named "lab05.cpp" with the following code:

```
37 for (int i = 0; i < CUANTOS; i++) {
38
39     numbers[i] = (rand() % 100) + 1;
40
41 }
42
43 // Print the phrase "The [quantity] values in the numbers array are: ", where
44 // [quantity] is substituted for the size of the array. DO NOT include a
45 // new line after the phrase.
46 printf("The %u values in the numbers array are: " sizeof(numbers));
47
48 // Develop a for iteration control structure which prints the contents of the array.
49 // Print a comma after each value, except the last one which is followed by a
50 // period and the endl operator. For example, if the contents pf the array are
51 // 1, 2, 3, 4, and 5, this code will print the values as 1, 2, 3, 4, 5.
```

The bottom of the image shows the "Error List" panel. It indicates "0 Errors" and "1 Warning". The warning is as follows:

Code	Description	Project	File	Line
C6328	Size mismatch: 'unsigned __int64' passed as '_Param_2' when 'int' is required in call to 'printf'.	CECS-2203_Lab05	lab05.cpp	46

I fixed it by writing:

```
printf("The %i values in the numbers array are: ", CUANTOS);
```

I replaced %u with %i and sizeof(numbers) with CUANTOS.