**Integer Pointers Program**

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Programming III CSC450-1

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# GIT REPOSITORY LINK

<https://github.com/Malypar/Integer-Pointers-Program.git>

# PSEUDOCODE

START PROGRAM

DISPLAY "ENTER 3 INTEGERS SEPARATED WITH SPACES"

READ THE VALUES 1, 2, 3 ADN STORE AS ORDINARY VARIABLES

ALLOCATE INT1 WITH VARIBALE1

ALLOCATE INT2 WITH VARIBALE2

ALLOCATE INT3 WITH VARIBALE3

DISPLAY VALUES STORED AS ORDINARY VARIABLES

DISPLAY "VALUE1 = ", VALUE1

DISPLAY "VALUE2 = ", VALUE2

DISPLAY "VALUE3 = ", VALUE3

DISPLAY VALUE WITH POINTERS

DISPLAY "INT1 = ", DEFER, "ADDRESS: "

DISPLAY "INT2 = ", DEFER, "ADDRESS: "

DISPLAY "INT3 = ", DEFER, "ADDRESS: "

//RELEASE THE MEMORY ALLOCATION

DELETE INT1

DELETE INT2

DELETE INT3

SET POINTERS TO NULL

END PROGRAM

# SOURCE CODE

#include <iostream>

using namespace std;

int main() {

    // ASK THE USER FOR THREE INTEGERS

    int x, y, z;

    cout << "Enter Three Integers Separatied With Spaces: ";

    cin >> x >> y >> z;

    // DYNAMICALLY ALLOCATE MEMORY FOR THREE INTEGERS

    int\* px = new int(x); // DYNAMICALLY ALLOCATE MEMORY FOR x

    int\* py = new int(y); // DYNAMICALLY ALLOCATE MEMORY FOR y

    int\* pz = new int(z); // DYNAMICALLY ALLOCATE MEMORY FOR z

    // DISPLAY THE CONTENTS OF THE VARIABLES

    cout << "\nThe Values Entered Are:\n";

    cout << "x = " << x << '\n';

    cout << "y = " << y << '\n';\

    cout << "z = " << z << '\n';

    // DISPLAY THE VALUES BASED ON POINTERS

    cout << "\nThe Values Based On Pointers Are:\n";

    cout << "\*px = " << \*px << " (address: " << px << ")\n";

    cout << "\*py = " << \*py << " (address: " << py << ")\n";

    cout << "\*pz = " << \*pz << " (address: " << pz << ")\n";

    // CLEAN UP THE MEMORY ALLOCATED FOR x, y, and z

    delete px; // FREE THE MEMORY ALLOCATED FOR x

    delete py; // FREE THE MEMORY ALLOCATED FOR y

    delete pz; // FREE THE MEMORY ALLOCATED FOR z

    px = py = pz = nullptr; // SET POINTERS TO NULL

    return 0;

}

# OUTPUT SCREENSHOTS

D:\OneDrive\Documents\CSU\CSC450-1\MODULE 3\CTA\Dynamic Memory>dynamicmemory

Enter Three Integers Separatied With Spaces: 5 6 8

The Values Entered Are:

x = 5

y = 6

z = 8

The Values Based On Pointers Are:

\*px = 5 (address: 0x25808fc1a20)

\*py = 6 (address: 0x25808fc1a40)

\*pz = 8 (address: 0x25808fc1a60)