Kartik Srivastava

Student ID – 3668516

LAB 2

**Exercise One:**

1. Yes, the values of the variables printed is the same because the data in the variables is the same for everyone.
2. No, the addresses were not the same because a different memory block is allocated for everyone. The addresses also change after each execution.
3. g2 will have a bigger address as it is called first. The variables in g2 will be put in the call stack first.

/\* p1.c \*/

#include <stdio.h>

#include <stdlib.h>

int g1(int a, int b)

{

    int c = (a + b) \* b;

    printf("g1: %d %d %d \n", a,b,c);

    printf("a's address is %p\n", &a);

    printf("b's address is %p\n", &b);

    printf("c's address is %p\n", &c);

    return c;

}

int g2(int a, int b)

{

    int c = g1(a + 3, b - 11);

    printf("g2: %d %d %d \n", a,b,c);

    printf("a's address is %p\n", &a);

    printf("b's address is %p\n", &b);

    printf("c's address is %p\n", &c);

    return c - b;

}

int main(int argc, char \* \* argv)

{

    int a = 5;

    int b = 17;

    int c = g2(a - 1, b \* 2);

    printf("main: %d %d %d \n", a,b,c);

    printf("a's address is %p\n", &a);

    printf("b's address is %p\n", &b);

    printf("c's address is %p\n", &c);

    return EXIT\_SUCCESS;

}

Output:

A picture containing green, table, sitting, holding

Description automatically generated

**Question Two:**

A screenshot of a cell phone

Description automatically generated

* g2 has 1 frame
* g1 has 0 frames.

**Question Three:**

A screenshot of a social media post

Description automatically generated