Bryant Mondragon

CPS 4200

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Source Code:

#include <stdio.h>

#include <string.h>

struct Person

{

int ID;

char fname[6];

char lname[9];

char bday[2];

char bmonth[2];

char byear[4];

};

int main(){

struct Person p1 = {.ID = 807198,

.fname = "Bryant",

.lname = "Mondragon",

.bmonth = "06",

.bday = "08",

.byear = "1993"

};

void \*baseptr;

asm("movl %%ebp, %0;"

:"=r"(baseptr)

);

*// void \*stackptr;*

*// asm( "movl %%esp, %0;"*

*// : "=rm" (stackptr)*

*// );*

*// printf("The value of stackpointer main: \n");*

*// printf("%p\n", stackptr);*

printf("The value of basepointer main: \n");

printf("%p\n", baseptr);

printf( "ID: %d\n", p1.ID);

printf( "First Name: %.6s\n", p1.fname);

printf( "Last Name: %.9s\n", p1.lname);

printf( "Birth Day: %.2s\n", p1.bday);

printf( "Birth Month: %.2s\n", p1.bmonth);

printf( "Birth Year: %.4s\n", p1.byear);

printPerson(p1, baseptr);

return 0;

}

void printPerson(struct Person p2, void\* baseptr)

{

void \*baseptr1;

asm("movl %%ebp, %0;"

:"=r"(baseptr1)

);

printf( "The value of basepointer print is: \n");

printf( "%p\n", baseptr1);

printf( "The value at basepointer address is: \n");

printf( "%x\n", baseptr);

printf( "Address of ID: %p\n", &p2.ID);

printf( "Address of First Name: %p\n", p2.fname);

printf( "Address of Last Name: %p\n", p2.lname);

printf( "Address of Birth Day: %p\n", p2.bday);

printf( "Address of Birth Month: %p\n", p2.bmonth);

printf( "Address of Birth Year: %p\n", p2.byear);

printf( "The address of my birth day and month is at address: %x\n", p2.bday);

char buffer[4];

sprintf(buffer, "%x%x%x%x",p2.bday[3],p2.bday[2],p2.bday[1],p2.bday[0]);

int n = strtol(buffer, NULL, 16);

printf( "The integer value of my birth day and month is: %d\n",n);

}

Proof of Output:

The value of basepointer main:

0xffcb96a8

ID: 807198

First Name: Bryant

Last Name: Mondragon

Birth Day: 08

Birth Month: 06

Birth Year: 1993

The value of basepointer print is:

0xffcb9658

The value at basepointer address is:

ffcb96a8

Address of ID: 0xffcb9660

Address of First Name: 0xffcb9664

Address of Last Name: 0xffcb966a

Address of Birth Day: 0xffcb9673

Address of Birth Month: 0xffcb9675

Address of Birth Year: 0xffcb9677

The address of my birth day and month is at address: ffcb9673

The integer value of my birth day and month is: 909129776

Output of Excel Sheet:

