CIS37A-Lab4

Due: July-16-2017, 11:59PM

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**Problem 1:** Write a main program to declare an integer array of size 3 and initialize it with 1, 2 and 3. Pass this array to a function called change. The function has two parameters one is the array and the other is the size of the array. The function should only use pointer notations and it should multiply each item of the array by 2 (using pointer notations). A second function called printArray should also accept two parameters one is the array and the other one is the size. This function should display the values of the array. Main program should test both functions. Also make sure to use the principle of least privilege for the printArray function.  
#include <stdio.h>

#include <conio.h>

#define SIZE 3

void change(int \*pIntArr, size\_t size)

{

for (size\_t i = 0; i < size; i++)

{

pIntArr[i] = (i+1) \* 2;

}

}

void printArray(int \*pIntArr, size\_t size)

{

for (size\_t i = 0; i < size; i++)

{

printf("%d\n", pIntArr[i]);

}

}

int main(void)

{

int arr[SIZE] = { 1, 2, 3 };

change(arr, SIZE);

printArray(arr, SIZE);

getch();

}



**Problem 2:** See lab file. (No output for this question).

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a) long \*lPtr;

b) lPtr = &value1;

c) printf("Value of \*lPtr = &d", \*lPtr);

d) \*lPtr = value2;

e) printf("Value of value2 = &d", \*lPtr);

f) printf("Address of value1 = &x", &value1);

g) printf("Address stored in lPtr = &x", lPtr);

No, the address stored in lPtr will be that of value2 since value2 was assinged to lPtr.

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**Problem 3:** See lab file. (Included question and did some testing to find the answers. Result of program version is included below).

#include <stdio.h>

#include <conio.h>

struct customer

{

char lastName[15];

char firstName[15];

unsigned int customerNumber;

struct {

char phoneNumber[11];

char address[50];

char city[15];

char state[3];

char zipCode[6];

} personal;

} customerRecord, \*customerPtr;

void main()

{

customerPtr = &customerRecord;

strcpy(customerRecord.lastName, "Pant");

printf("Last Name: %s\n", customerPtr->lastName);

strcpy(customerRecord.firstName, "Subal");

printf("First Name: %s\n", customerPtr->firstName);

customerRecord.customerNumber = 25;

printf("Customer Number: %d\n", customerPtr->customerNumber);

strcpy(customerRecord.personal.phoneNumber, "555-555-5555");

printf("Phone Number: %s\n", customerPtr->personal.phoneNumber);

strcpy(customerRecord.personal.address, "1 Hacker Way");

printf("Address: %s\n", customerPtr->personal.address);

strcpy(customerRecord.personal.city, "Menlo Park");

printf("City: %s\n", customerPtr->personal.city);

strcpy(customerRecord.personal.state, "CA");

printf("State: %s\n", customerPtr->personal.state);

strcpy(customerRecord.personal.zipCode, "94025");

printf("Zip Code: %s\n", customerPtr->personal.zipCode);

getch();

}

/\*

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a) customerRecord.lastName

b) customerPtr->lastName

c) customerRecord.firstName

d) customerPtr->firstName

e) customerRecord.customerNumber

f) customerPtr->customerNumber

g) customerRecord.personal.phoneNumber

h) customerPtr->personal.phoneNumber

i) customerRecord.personal.address

j) customerPtr->personal.address

k) customerRecord.personal.city

l) customerPtr->personal.city

m) customerRecord.personal.state

n) customerPtr->personal.state

o) customerRecord.personal.zipCode

p) customerPtr->personal.zipCode

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