CSCI 3232 Systems Software Assignment 3

Upload all your files to the dropbox in Folio before the deadline --- **11:30PM Sep 12, Tuesday, 2017. Note: Make all your source codes compilable and runnable under Ubuntu. Do NOT put your codes in Word or PDF documents. Make them into separate text files with appropriate file extensions (.h, .c, etc) as you would compile them.**

2.

|  |  |  |
| --- | --- | --- |
| Variable | Start address | End address |
| a | 100 | 100 |
| pc | 101 | 108 |
| c | 109 | 116 |
| i | 117 | 120 |
| pk | 121 | 128 |
| k | 129 | 160 |

|  |  |
| --- | --- |
| Variable | Value |
| a | ’N’ |
| pc | c-1 |
| c | ’G’,’H’,’I’,’J’,’K’,’L’,’M’,’N’ |
| i | 8 |
| pk | k+8 |
| k | 5,6,7,8,9,10,11,12 |

1. 1+8+8+4+8+32=61

3. Which is true about the following codes?

#include <stdio.h>

#include <string.h>

struct Books//define the struct Books

{

char title[50];

char author[50];

char subject[100];

int book\_id;

} Book1;

struct Books book;

int main(int argc, char \*argv[])

{

strcpy(book.title,"C Programming");

strcpy(book.author,"Nuha Ali");

strcpy(book.subject,"C Programming Tutorial");

book.book\_id=6495407;

strcpy(Book1.title,"Telecom Billing");

strcpy(Book1.author,"Zara Ali");

strcpy(Book1.subject,"Telecom Billing Tutorial");

Book1.book\_id=6495700;

struct Books \*struct\_pointer;

struct\_pointer = &Book1;

printf("Book1's title is %s\n",struct\_pointer->title);

printf("Book1's author is %s\n",struct\_pointer->author);

printf("Book1's subject is %s\n",struct\_pointer->subject);

printf("Book1's book\_id is %d\n",struct\_pointer->book\_id);

struct\_pointer = &book;

printf("book's title is %s\n",struct\_pointer.title);

printf("book's author is %s\n",struct\_pointer.author);

printf("book's subject is %s\n",struct\_pointer.subject);

printf("book's book\_id is %d\n",struct\_pointer.book\_id);

return 0;

}//end of main

1. Compile error b. Compiles OK, runtime error c. Compiles and runs OK d. none of the above statements is true

4. Suppose we have three variables declared as

char \*pc;

int \*pi;

double \*pd;

Assume sizeof(char)=1, sizeof(int)=4, sizeof(double)=8. The values of pc, pi, pd are 240, 258, 380, respectively. What are the values of pc+1, pi+2, pd-3?

pc+1=240+1\*1=241,

pi+2=258+4\*2=266,

pd+3=380-8\*3=356