CSCI 3232 Systems Software Assignment 2

Upload all your files to the dropbox in Folio before the deadline --- **11:30PM Jan 31, Thursday, 2019. Note: For any program source codes you are asked to write, put them into separate TEXT (.c, .cpp, .h, .sh) files as you would compile them under Ubuntu. Do NOT put your codes in Word or PDF documents.**

1. (20 points) Which is true of the following C program? You should be able to get the answer without compiling and running it.

#include <stdio.h>

int main()

{

int x=9;

int \*q=&x;

x=x+1;

(\*q)+=1;

int y=x\* \*q;

printf("square is %d\n",y);

return 0;

}

a. compile error; b. runtime error; c. runs correctly and output “square is 81”; d. runs correctly and output “square is 90”; e. runs correctly and output “square is 100”; f. runs correctly and output “square is 110”; g. runs correctly and output “square is 121”

2. (20 points) Write a C program A2p2.c to print out “hello world” 15 times. Be sure not to write printf 15 times. Instead, print 5 times of “hello world” with each of the *for*, *while, do..while* loops. Include at the top of your source code file that specify what commands you have used to compile and run your code.

3. (20 points) What is the output of the following C program? You should be able to write the answer without compiling and running it.

#include <stdio.h>

int main()

{

int x=11,y=4;

int q=x/y;

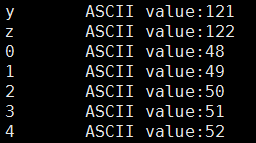
double dq=(double)x/y;

printf("q=%d,dq=%f\n",q,dq);

return 0;

}

4. (20 points) Write a C program A2p4.c to print all the upper case and lower case English characters and the ten decimal digits characters (‘0’-‘9’), together with their ASCII values. Print each character and its ASCII value in one line. Thus your output should contain 26+26+10=62 lines, each line containing a character and its ASCII value. Part of your output can look like the following figure:



5. (20 points) Which is true of the following C program? You should be able to figure out the answer without compiling and running it.

#include <stdio.h>

int main()

{

int x=57;

printf("xd=%d,xc=%c\n",x,x);

return 0;

}

a. compile error; b. runtime error; c. output “xd=57,xc=57”; d. output “xd=9,xc=9”; e. output “xd=0,xc=0”; f. output “xd=57,xc=9”; g. output “xd=48,xc=0”

|  |
| --- |
| 1) g |
|  |
| 3) q=2,dq=2.750000 |
|  |
| 5) f |