/* Without running the code, read through the code and write the answers to the 8 questions */
/* each question asks you to analyze the code and write down what you think the program will do */
#include <stdio.h>
#include <string.h>
const int k = 8;

int itsGlobal = 0;

int foo1(x) 
{
    int i, y;
    printf("Question 8(a) foo1: x= %d y=%d i = %d\n", x, y, i);
    x = x+20;
    y = y+30;
    i = 100;
    return(y);
}
void foo2(void) 
{
    int i;
    int x = 10;
    static int y = 20;

    printf("foo2: x= %d y=%d i = %d\n", x, y, i);
    y = y + 30;
    i = 500;
    return;
}
void swap(int a, int b) 
{ int temp;
    temp = a;
    a = b;
    b = temp;
    return;
}

int main() 
{ int x = 4;
    int itsLocal = 1;
    int y, z;
    int a, b;
    const int CC = x+4;
    /* Ques.1 */
    /* what is printed by the printf below -- i.e., what values itsGlobal and itsLocal */
    printf("Question1: Global= %d Local = %d\n", itsGlobal, itsLocal);
    {
        int itsLocal = 2;
        itsGlobal = 4;
        /* Ques.2 */
        /* what is printed in the first printf below -- i.e., what are the values of itsGlobal and itsLocal */
        printf("Question2: Global= %d Local = %d\n", itsGlobal, itsLocal);
    }
    /* Ques.3 */
    /* what is printed in the printf below -- i.e., what are the values of itsGlobal and itsLocal */
    printf("Question 3: Global= %d Local = %d\n", itsGlobal, itsLocal);
}
/* Ques.4 */
/* consider the if statement below - we want to print True if x is between 2 and 7, and print false otherwise */
/* What do you think will be the output of the program - i.e, the print statements */

{x=4;

    if (7 > x > 2 )
        printf(" Question 4: x between 2 and 7 is True\n");
    else
        printf("Question 4: x between 2 and 7 is False\n");

/* Ques.5 */
/* what do you think will be printed out by the loop below */
for (x=4; x <4; x--){
    if (x <2) printf("Question 5: hello\n");
    else if (x==4) printf("Question 5: bye\n");
}

/* Ques.6 */
/*what will the code below print out */
y=x++;
z = ++x;
x++;

    if (y==z) printf("Question 6: True \n");
    else printf("Question 6: False\n");

/* Question 6(b): what values of y,z are printed out below */

    printf("Question 6a: y = %d, z = %d \n", y,z);

/* Question 7: What is the value of CC printed below */

    printf("Question 7: value of CC is = %d \n", CC);

/* Ques.8(a) */
/* what is printed (by foo1) when you call foo1 */
y = foo1(x);
/* what is printed after returning from foo1 */
printf(" Question 8(b) : value of x = %d, value of y= %d \n", x,y);

/* Question 9: What is printed when foo2 is called */

    foo2();

    /* Question 10: What is printed (values of a,b) in the printf statement after calling function swap */
    a=10;
b=20;
swap(a,b);
printf("Question 10: value of a is= %d value of b = %d\n", a,b);

    /* Question 11: what is printed when you call foo2 the second time */
    foo2();

/* Ques.12 */
/* what happens in this while loop */
/* while (x >0)
    x++; printf("Exiting program\n");
    printf("x = %d \n", x); */
}