COEN 11 - Practice III
Solutions on Wednesday

1. What is printed?

    int main ( )
    {
        int a = 5;
        int *p = &a;

        x (&a);
        printf ("%d\n", *p + 10);
        return;
    }

    void x (int *b)
    {
        *b = 10;
        return;
    }

2. What is printed?

    typedef struct
    {
        int number;
        int *pointer;
    } ST_TYPE;

    int main ( )
    {
        ST_TYPE st_var;
        ST_TYPE *st_pointer;
        int local = 10;

        st_pointer = &st_var;
        st_var.number = 5;
        st_var.pointer = &local;

        printf ("%d\n", st_pointer->number);
        printf ("%d\n", *(st_pointer->pointer));
        return;
    }
3. Write a function to traverse a 2D array with a pointer, adding 100 to each element.

4. Write a function that reverses a string using pointers (for example: “abc” becomes “cba”, and “abcd” becomes “dcba”).

5. Write a function to traverse an array of structures, in which one member is an integer x and the other is a union u. The members in the union are one integer y and one string s. When x is 1, y is valid, but when x is 0, s is valid. Your function should traverse the array counting the number of elements y between 10 and 100 and the numbers of elements y that are less than 10 or more than 100. Use a pointer to traverse the array.