**Introduction to Pointers Assignments**

1. Refer the code snippet below. int main()

{

char arr=”hello hi “;

int \*ptr = arr;

printf(“sizeof ptr:%d, arr:%d”, sizeof(ptr), sizeof(arr));

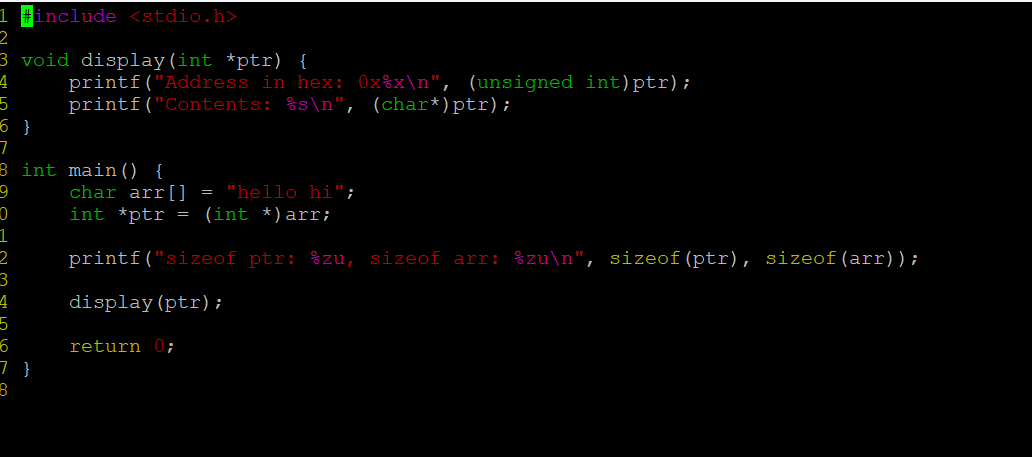
display(ptr); // display the address in hex and contents using pointer

}

Perform the following.

a. Implement the display() function (Use the “0x%x” formatting specifier to print addresses in hexadecimal.)

b. comment on the sizeof(ptr) and sizeof(arr)



OUTPUT:

A black background with white text

Description automatically generated

2. Refer the code snippet below. int main()

#define MAX 100

#define SUCCESS 0

#define FAILURE 1

int main()

{

char arr[MAX] = “Learning C“;

char\*ptr = arr;

char appendstr[3]= “in my org”;

printf(“Address of ptr:%x”, ptr);

int ret = append(ptr, appendstr);// append the string

printf(“Address of ptr:%x”, ptr);

if (ret == SUCCESS)

{

display(ptr); // display the address in hex and contents using pointer

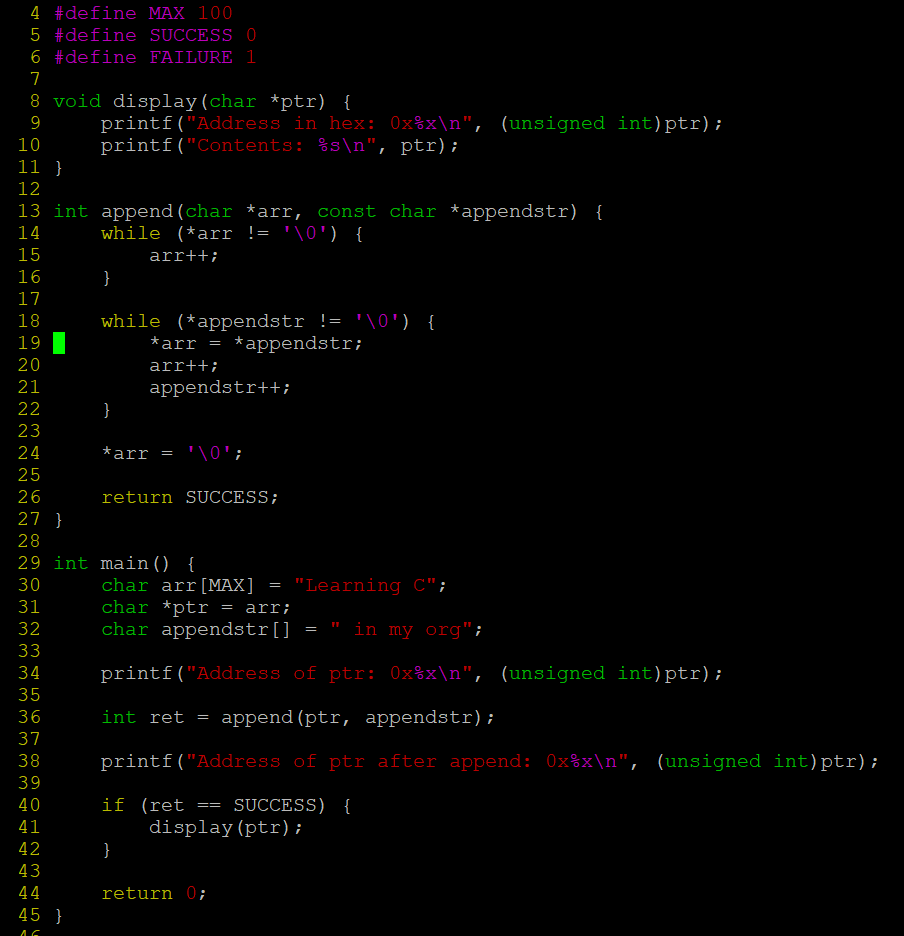
}

}

Perform the following.

a. Implement the append() function to append the contents of the appendstr[] to arr using pointer.

[Note: append() should only use its content and not manipulate it. Contents should be retained even after the call]

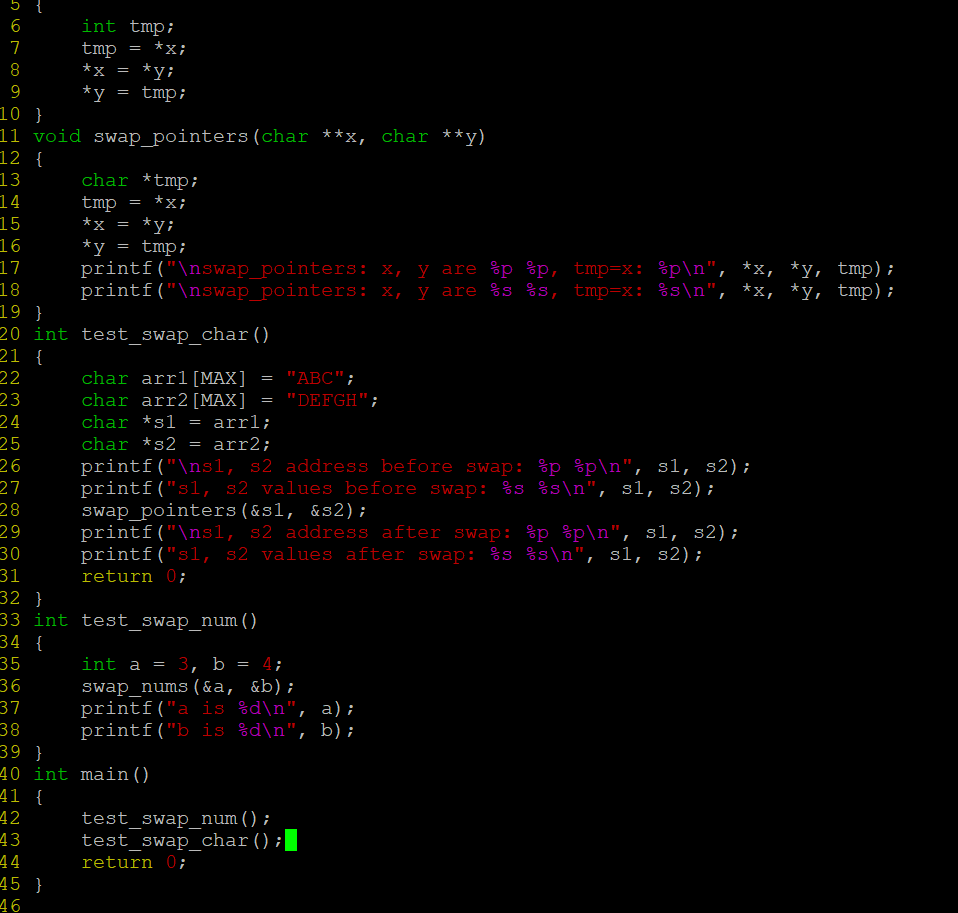


OUTPUT:

A black screen with white text

Description automatically generated

3. Refer the code in “pointer\_prg.c”. The functions swap\_nums() and swap\_pointers() are expected to swap the numbers and pointers respectively. But swap\_pointers() is currently not giving the expected results. Analyse and the fix the issue.



OUTPUT:

A computer screen with numbers and letters

Description automatically generated