Sabrina Tay

Sxt467

Homework 1

Computer Security

Problem 2:

Output for the first one was:

String after concatenation |dest+src|

Output for the second input was:

String after concatenation |do you think i Can successfully append the dest to the src?append the dest to the src?a|

The following code solves the problem, fgets will not get more than 30 characters

int main(void){

char src[30], dest[30];

fgets(src, 30, stdin);

fgets(dest, 30, stdin);

strcat(dest, src);

printf("String after concatenation |%s|", dest);

return (0);

}

Problem 3:  
The largest number an int can hold is 4294967296, so if len1 + len2 is equal to or greater than 4294967296 the +1 will make the value of that sum wrap back around and give a number less than 1024. The array will not be its intended length. This will also then mess up the memcpy as buffer overflow can occur if there is not enough memory space in the specified buffers, messing up the way the strings are stored.

Problem 4:

Since cbBuf is a long, the largest number it can hold is 9,223,372,036,854,775,807, which is a lot more than the maximum an unsigned short can hold is 65,535. This means that it would cause a buffer overflow for cbCalculatedShortSize. Hence this will cause the buf to also have an error. Memcpy will also have a buffer overflow because the buf might not have enough space to hold cbBuf.