# UNB
# Faculty of Computer Science
# **Assignment 6**      CS2253  Fall 2021

**Due Date: December 2, 2021 - 8:30 am**

**Purpose**: Questions on pointers and arrays

1. Write a C function `char* find blank(char *start)` that will return a pointer to the first blank char in the string pointed to by start. Write a main program to test your function. Test the program with a variety of strings. Provide at least 4 tests. You may not use `[ ]` in your code.

2. Write a C function `void four stars(char *start)` that will replace the the four character pointed to by start with `"****"`.

3.   a) Manually compile your function from question 2 into a LC3 subroutine. Don't forget the preamble to finish building the stack frame and the code before `RET` to start tearing it down. Also, don't forget to save and restore any registers that the caller doesn't expect to change ("callee save rule").

     b) Draw the LC3 activation record for this function. No need to put any values, simply label each location.

4. Write a C function `void censor(char *start)` that will replace all 4 letter words in the string pointed to by start with `****`. You may assume that words are delimited by blank chars. The beginning and the end of strings are also delimiters. Use the functions written for question 1 and 2. You may not use `[ ]` in your code.

   For example, the following code:

   ```c
   int main(){
     char myStr[50] = "this is a test for the last word in line";
     censor(myStr);
     printf("%s\n", myStr);
   }
   ```

   would yield:

   ```
   **** is a **** for the **** **** in ****
   ```

**Submit your assignment**: Write up your assignment using a word processor and submit a pdf file, as well as a C source file with the code for questions 1,2,4.