C Programming Assignment 4

1. A C program contains the following declaration
   float table[2][3] = { { 1.1,1.2,1.3},{2.1,2.2,2.3}};
   a) What is the meaning of a table?
   b) What is the meaning of (table+1)?
   c) What is the meaning of *(table+1)?
   d) What is the meaning of (*(table+1)+1)?
   e) What is the meaning of (*(table)+1)?
   f) What is the value of *(*(table+1) +1)?
   g) What is the value of *(*(table)+1)?
   h) What is the value of *(*(table+1)?
   i) What is the value of *(*(table) + 1)+1?

2. A C program contains the following declaration
   char *color[6] = {“red”, “green”, “blue”, “white”, “black”, “yellow”};
   a. What is the meaning of color?
   b. What is the meaning of (color+2);
   c. What is the value of *color?
   d. What is the value of *(color+2)?
   e. How do color[5] and *(color + 5) differ?.
3. Write a program to count the number of ‘e’ in the following array of pointer to the string.
   char * s [ ] = {
   “we will teach you how to “ ;
   “Move a mountain “ ;
   “Level a building “ ;
   “Erase the past “;
   “Make a million “ ;}.

4. Write a function ``replace'' which takes a pointer to a string as a parameter, which replaces all spaces in that string by minus signs, and delivers the number of spaces it replaced.
   Thus
   char *cat = "The cat sat";
   n = replace(cat);
   should set
   cat to "The-cat-sat"
   and
   n to 2
5. Write a program to convert lower case string to upper case string and vice versa.
6. Write a program to reverse a string using recursive functions

7. Write a program to read n number of strings using two-dimensional character array, sort them and display the sorted list of strings on the screen.
8. Write a program to read n number of strings and display them on the screen. Use array of pointers and dynamic memory allocation techniques.
9. Write a C program with a function any (s1, s2). This function returns the first location (index of location) in the string s1 which matches with any string in s2 otherwise.
10. Write a C program with a function delete (s1, c). This function deletes each character in s1 which matches character c.
11. Write a Program to implement ***strtok*** library function.
12. Write a C program with a function deletes2 (s1, s2). This function deletes each character in string s1 which matches any character in string s2.
13. Write a function expand (s1, s2) which expands shorthand notations of s1 like a-d into abcd and 0-9 to 0123456789 in s2. For example if the string in s1 is 0123a-e1-4 then s1 is expanded in s2 to 0123abcde1234.
14. Write a program to print out all rotations of a string typed in. For eg:if the input is “Space”, the output should be: space paces acesp cespa espac.
15. Implement string library functions. strrev, strcpy, strcat, strcmp with same return values and all error handling features using pointers.