**LAB Week 13**

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**Reg#:Sp21-BSE-008**

## Functions, Pointers, File Handlings, Strings, Loops

### Objectives

* The objective of this exercise is to get you to write, compile and run more complex programs in C which make use of loops, functions, pointers, file handling and strings.

### Pre-Lab Tasks

**Exercise 1:** Write a function that receives a text file pointer and counts the total number of words in that given text file.

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| #include<stdio.h>  int main()  {  FILE \*fp;  char ch;  int count=0;  fp=fopen("talha.txt","r");  if(fp==NULL)  {  printf("File does not exists");  return 0;  }  while((ch=fgetc(fp))!=EOF)  {  if(ch==' '||ch=='\n')  count++;  }  printf("\n----------Total Number of Words: %d\n\n",count);  fclose(fp);  return 0;  } |

### Lab Tasks

**Exercise 1:** In continuance with the previous exercise problem. You are supposed to write a function that receives a word [String] from the user and counts its frequency in the given text file.

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| #include <stdio.h>  #include <stdlib.h>  #include <string.h>  int countwordfrequency(FILE \*fptr, char \*word);  int main()  {  FILE \*fptr, \*fptr\_n;  char ch;  int wrd=0;  char word[30];  printf("Enter a word for Search: ");  scanf("%s", word);  fptr=fopen("talha.txt","r");  if(fptr==NULL)  {  printf("File does not exist");  }  else  {  while((ch=fgetc(fptr))!=EOF)  {  if(ch==' '||ch=='\n')  wrd++;  }  printf("Total Number of Words in a File are : %d\n",wrd);  }  fclose(fptr);  fptr\_n=fopen("talha.txt","r");  int wrdcount;  wrdcount = countwordfrequency(fptr\_n, word);  printf("The frequency of the word %s is: %d",word,wrdcount);  fclose(fptr\_n);  }  int countwordfrequency(FILE \*fptr, char \*word)  {  char str[1000];  char \*pos;  int index=0, count=0;  while ((fgets(str, 1000, fptr)) != NULL)  {  while ((pos = strstr(str + index, word)) != NULL)  {  index = (pos - str) + 1;  count++;  }  }  return count;  } |