**Assignment 12 Dec 2017 [Structure & Union ]**

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| **Q1. Write a program to read given file and copy alternate lines of that file into new file. Say, create original.txt with some text, create file copy\_alternate.txt using file operations to read original.txt and copy 1st, 3rd, 5th, so on, line into new file (copy\_alternate.txt). Validate file creation usingcommand $ cat copy\_alternate.txt**  **#include<stdio.h>**  **#include<stdlib.h>**  **#include<string.h>**  **int main()**  **{**  **FILE \*file\_pointer1, \*file\_pointer2;**  **int count=0;**  **char str[100];**  **file\_pointer2 = fopen("file.txt", "w");**  **if((file\_pointer1 = fopen("file1.txt","r")) == NULL)**  **{**  **printf("\nFile doesnt exists\n");**  **exit(0);**  **}**  **else**  **{**  **while(fgets(str, 100, file\_pointer1) != NULL )**  **{**  **count++;**  **if(count%2 != 0)**  **fputs(str, file\_pointer2);**    **}**  **}**  **printf("\nNo. of lines :: %d\n", count);**  **fclose(file\_pointer1);**  **fclose(file\_pointer2);**    **return 0;**  **}** |
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| **Q2. Given a file name (Say, sample.txt), write a program to read the file (character by character and string by string ways) and print the contents of file.**  **#include<stdio.h>**  **#include<stdlib.h>**  **int main()**  **{**  **FILE \*file\_pointer;**  **char ch;**  **file\_pointer = fopen("sample.txt","r");**    **if(file\_pointer == NULL)**  **{**  **printf("This file Doesnt Exists...!!\n");**  **exit(0);**  **}**    **while((ch = fgetc(file\_pointer)) != EOF)**  **{**  **printf("%c", ch);**  **}**  **fclose(file\_pointer);**  **return 0;**  **}** |
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| **Q4. Write a program to read file contents and print number of occurrences of given string in that file.**  **#include<stdio.h>**  **#include<stdlib.h>**  **#include<string.h>**  **int main()**  **{**  **FILE \*file\_pointer;**  **file\_pointer = fopen("sample.txt", "r");**  **int line\_num = 1;**  **int find\_result = 0;**  **char search[50], str[100];**  **if(file\_pointer == NULL)**  **{**  **printf("File Doesn't exists...!\n");**  **exit(0);**  **}**  **printf("Which string you want to search??::");**  **scanf("%s", search);**  **while(fgets(str, 100, file\_pointer) != NULL)**  **{**  **if((strstr(str, search)) != NULL)**  **{**  **printf("A match found on line: %d\n", line\_num);**  **printf("\n%s\n", str);**  **find\_result++;**  **}**  **line\_num++;**  **}**  **if(find\_result == 0) {**  **printf("\nSorry, couldn't find a match.\n");**  **}**  **if(file\_pointer) {**  **fclose(file\_pointer);**  **}**  **return(0);**  **}** |
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| **Q5. Write a program to read given file contents and print only last 3 lines of that file.**  **#include<stdio.h>**  **#include<stdlib.h>**  **void main()**  **{**  **FILE \*file\_pointer;**  **int count=0;**  **long int pos;**  **char string[100];**  **file\_pointer=fopen("sample.txt","r");**  **if(file\_pointer==NULL)**  **{**  **printf("\n file unable to open\n");**  **exit(1);**  **}**  **fseek(file\_pointer,0,SEEK\_END);**  **pos=ftell(file\_pointer);**  **while(pos)**  **{**  **fseek(file\_pointer,--pos,SEEK\_SET);**  **if(fgetc(file\_pointer)=='\n')**  **{**  **if(count++==3)**  **break;**  **}**  **}**  **while(fgets(s,sizeof(string),file\_pointer)!=NULL)**  **printf("%s",string);**  **fclose(file\_pointer);**  **}** |
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