

CSE115L – Computing Concepts Lab
Lab 15

File creation, reading from and writing to file:

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| <pre>#include<stdio.h> int main() { FILE *fp; fp=fopen("test.txt","r"); if(fp != NULL) { printf("File has been opened"); fclose(fp); } else printf("File not found") return 0; }</pre> | <pre>#include<stdio.h> #include<string.h> int main() { FILE *fp; fp=fopen("test.txt","r"); char c; while((c=getc(fp))!=EOF) putchar(c); fclose(fp); return 0; }</pre> |
| <pre>#include<stdio.h> #include<string.h> int main() { FILE *fp; char buffer[30]; strcpy(buffer,"File has been created"); fp=fopen("test.txt","w"); fprintf(fp,buffer); fclose(fp); return 0; }</pre> | |

Input from and output to a file:

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| <pre>#include <stdio.h> struct s { char name[50]; int height; }; int main() { struct s a[5]; FILE *fptr; int i; fptr=fopen("file.txt","r"); for(i=0;i<5;++i) { fgets(a[i].name, 50, fptr); fscanf(fptr,"%d",&a[i].height); getc(fptr); } for(i=0;i<5;++i) { printf("%d:\nName: %s\n",i+1,a[i].name); printf("Height: %d\n",a[i].height); } fclose(fptr); }</pre> | <pre>#include <stdio.h> int main() { char name[50]; int marks,i,n; printf("Enter number of students: "); scanf("%d",&n); fflush(stdin); FILE *fptr; fptr=(fopen("student.txt","a")); if(fptr!=NULL) { for(i=0;i<n;++i) { printf("For student%d\n",i+1); printf("Enter name: "); gets(name); printf("Enter marks: "); scanf("%d",&marks); fflush(stdin); fprintf(fptr,"Name: %s\n",name); fprintf(fptr,"Marks: %d\n",marks); } fclose(fptr); } return 0; }</pre> |
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Appending a file:

```
#include<stdio.h>
#include<string.h>
int main()
{
    FILE *fp;
    fp=fopen("append.txt","a");
    fprintf(fp,"Append mode");
    fclose(fp);
    return 0;
}
```

Problems:

1. Write a program that will read names, ids, dept names, and cgpa of some students from a file and will show the results. Consider that the name of the file is 'input.csv'. It is just a text file where each line holds information of one student. Example format of two lines in the file is as follows:

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| Moinul Islam, 21, Computer Science, 3.98 |
| Abu Hena, 11, Finance, 3.45 |

Read all information from the file, and print them on screen (one student per line). Your program should use the following structure to hold information of a student

```
typedef struct
{
    char name[50];
    int id;
    char dept[20];
    double cgpa;
} student;
```

2. Write a function **void pintByDept(char *deptName , student allStudents[], int size)** that will print the information of only those students who belong to the department with name pointed to by **deptName**. The array **allStudent** is of length 'size' and holds information of all the students.
3. Write a function **void saveByDept(char *fileName, char *deptName , student allStudents[], int size)** that will save the information of all students who belong to the department with name pointed to by **deptName** into a text file. The name of the file is given as an input parameter, **fileName**.