

MA 511: Computer Programming

Lecture 19

http://www.iitg.ernet.in/psm/indexing_ma511/y08/index.html

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Mon 10:00-10:55 Tue 11:00-11:55 Fri 9:00-9:55 Class: 1G2

MA512 Lab : Wed 14:00-16:55

Data Files

Example:

```
#include <stdio.h>
main(){
    FILE *fp;
    int i;
    fp = fopen("output.dat", "w");
    if(fp==NULL)
        printf("Error for opening a file\n");
    for(i=65; i<90; i++)
        fprintf(fp, "%c\n", i);
    fclose(fp);
}
```

FILE: spl structure type that establishes the buffer area

fp : pointer variable pointing to the beginning of the buffer area.

`fp=fopen(file-name, file-type);`

“r” : open a existing file for reading

“w” : opening a new file for writing, overwrite if file exist.

“a” : opening an existing file for appending, create if not exist.

“r+” : opening an existing file for read and write.

“w+” : opening a new file for both reading & writing, overwrite if file exist.

“a+” : opening a new file for reading and appending, create if not exist.

Reading a Data File

Example:

```
#include <stdio.h>
main(){
    FILE *fp1;
    char ch;
    fp1 = fopen("output.dat", "r");
    if(fp1==NULL)
        printf("Error for opening a file\n");
    else{
        fscanf(fp1, "%c", &ch);
        while(!feof(fp1)){
            printf("%c",ch);
            fscanf(fp1, "%c", &ch);
        }
    }
    fclose(fp1);
}
```

Assignment

- Write a C program for inserting an integer before a given target value in a given array of integer.
- Write a C program for deleting a given value in a given array of integer.
- Write a C program for (i) writing integers 1-100 to a file (fwrite.dat) (ii) read data from the file fwrite.dat, identify numbers which are perfect square and write over a new file (newfile.dat).