

## C Programs with Mustafa Rahman

### Web & Software Developer

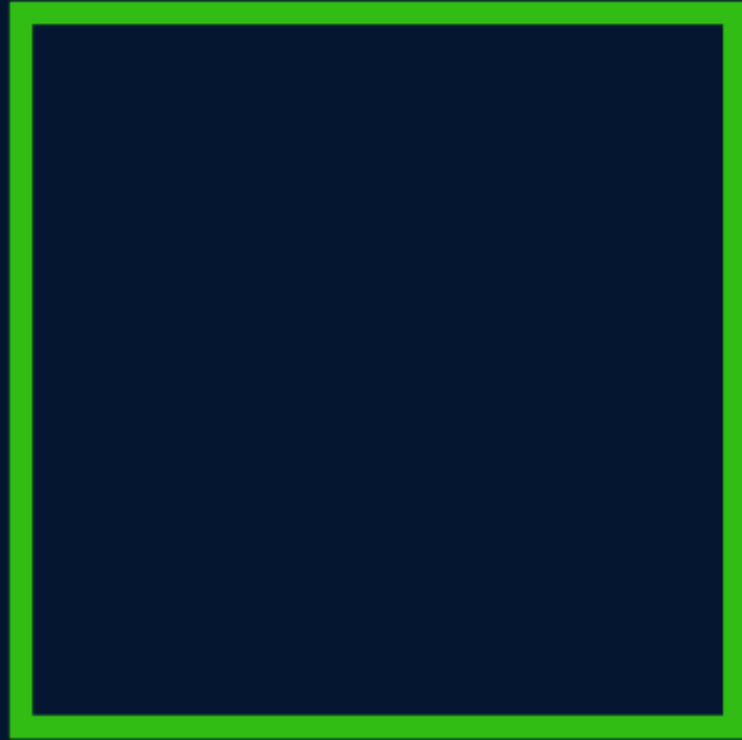
C360Soft.Ai, India. (Remote Job)

ICT Lecturer of MIFM



# File IO

RAM



Hard Disk



# File IO

FILE - container in a storage device to store data

- RAM is **volatile**
- Contents are lost when program terminates
- Files are used to persist the data

# Operation on Files

Create a File

Open a File

Close a File

Read from a File

Write in a File

# Types of Files

## Text Files

textual data

.txt, .c

## Binary Files

binary data

.exe, .mp3, .jpg

# File Pointer

**FILE** is a (hidden) structure that needs to be created for opening a file

A FILE **ptr** that points to this structure & is used to access the file.

```
FILE *fptr;
```

# Opening a File

```
FILE *fptr;
```

```
fptr = fopen("filename", mode);
```

# Closing a File

```
fclose(fptr);
```

# File Opening Modes

"r" open to read

"rb" open to read in binary

"w" open to write

"wb" open to write in binary

"a" open to append



# BEST Practice

Check if a file exists before reading from it.

# Reading from a file

```
char ch;
```

```
fscanf(fptr, "%c", &ch);
```

# Writing to a file

```
char ch = 'A';
```

```
fprintf(fp, "%c", ch);
```

# Read & Write a char

`fgetc(fptr)`

`fputc( 'A', fptr)`

# EOF (End Of File)

`fgetc` returns `EOF` to show that the file has ended