

# Files in C

## 1. How to Open a File:

- To open a file in C, you need to declare a file pointer and use the `fopen()` function.
- A file pointer is a variable that holds the memory address of the file being accessed.
- The `fopen()` function takes two parameters: the file path and the mode in which you want to open the file.
- The mode can be specified as `"r"` for reading, `"w"` for writing, `"a"` for appending.
- The `fopen()` function returns a file pointer that you can use to perform operations on the file.

Example:

```
FILE *fptr; // Declare a file pointer
fptr= fopen("file.txt", "r"); // Open file in reading mode
fptr= fopen("file.txt", "w"); // Open file in writing mode
fptr= fopen("file.txt", "a"); // Open file in appending mode
```

## 2. How to Perform Operations on Files:

- After opening a file and obtaining a file pointer, you can perform various operations like reading or writing data to the file using different functions.
- The file pointer is used as an argument in these functions to specify the file on which the operation is performed.

**Reading from a file using `fgets()` :**

```
FILE *fptr;
char data[250];

// Open the file in read mode
fptr= fopen("example.txt", "r");

// Read a line of text from the file
fgets(data, sizeof(data), fptr);
```

## Writing to a file using `fprintf()` :

```
FILE *fptr;

// Open the file in write mode
fptr= fopen("example.txt", "w");

// Write data to the file
fprintf(fptr, "Hello, World!");
```

### 3. How to Close a File:

- After you finish working with a file, it's important to close it using the `fclose()` function.
- The `fclose()` function takes the file pointer as a parameter and closes the file.

Example:

```
FILE *fptr;

// Open the file
fptr= fopen("example.txt", "r");

// Perform operations on the file

// Close the file
fclose(fptr);
```