

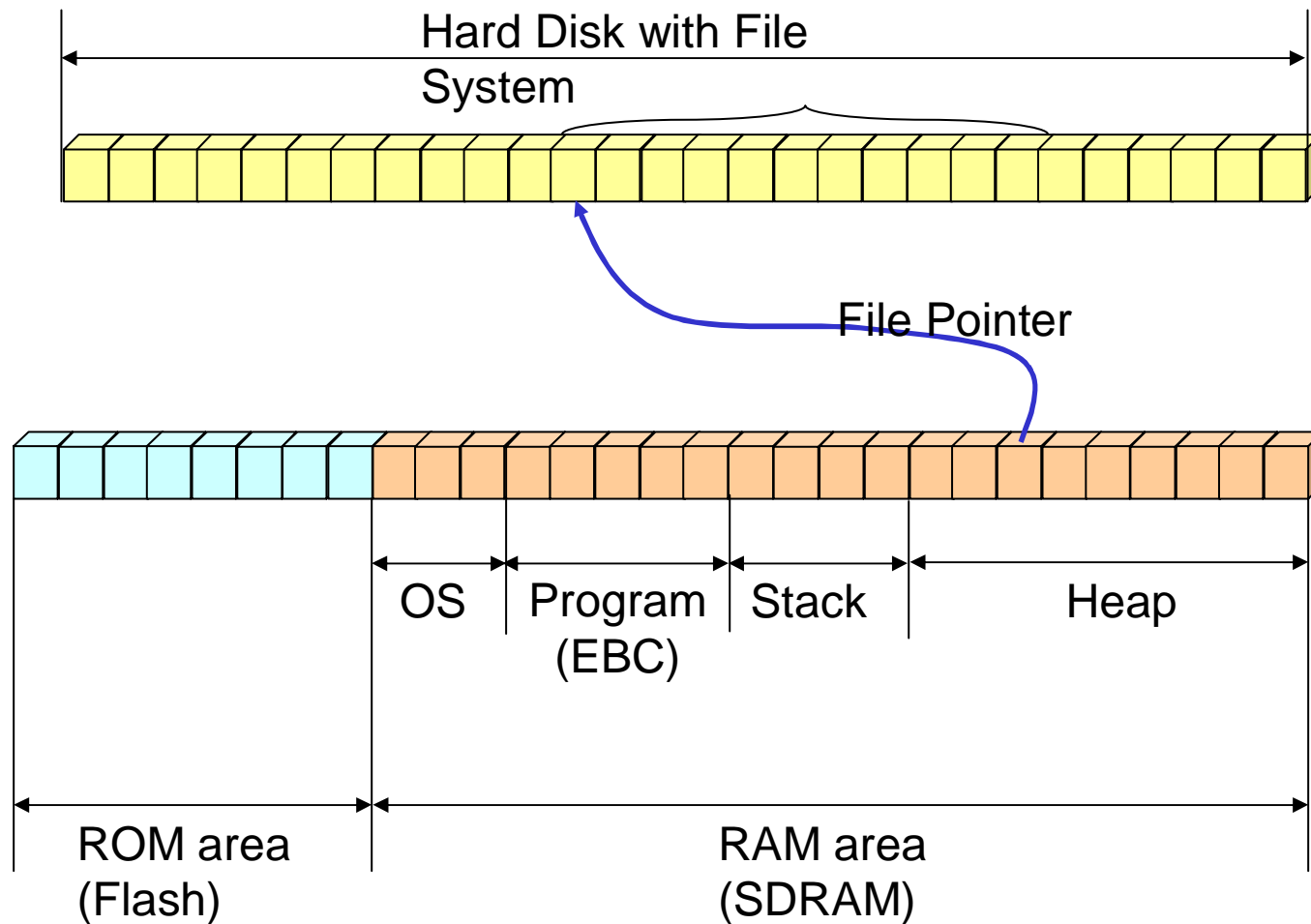
# Files in C-Language



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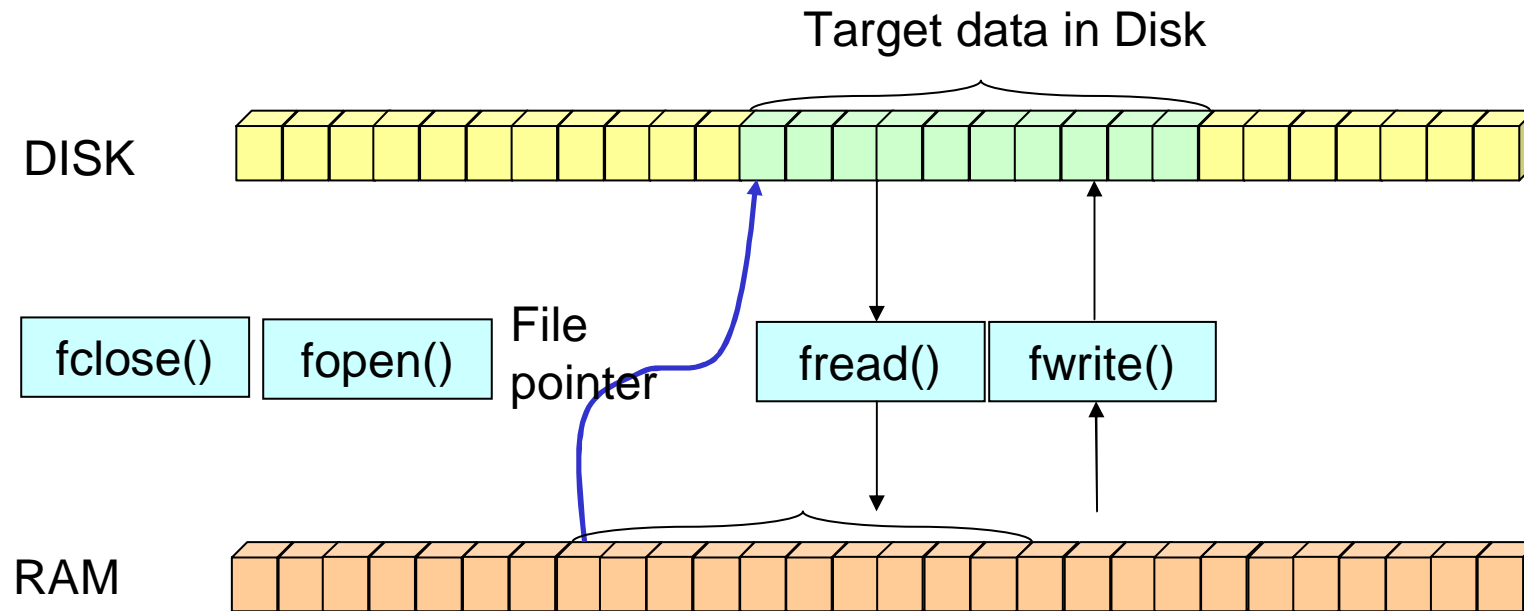
# Handling Files

- Files in memory map



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# Handling Files

- How to create files

```
main()
{
    unsigned char buf[1024];
    FILE* fp;
    fp = fopen("filename", "rb");
    fread(buf, 1, 1024, fp);
    fclose(fp);
}
```

- Prepare memory for data from file in disk

- Prepare a pointer to file

- Allocate a file control memory in the heap
- Open the file "filename" for read only

- Copy file data (1024 bytes) to the memory "buf"

- De-allocate the memory
- Close the file

# Handling Files

- How to create files

```
main()
{
    unsigned char buf[1024];
    FILE* fp;

    memset(buf, 0, 1024);
    fp = fopen("filename", "wb");

    fwrite(buf, 1, 1024, fp);

    fclose(fp);
}
```

- Prepare memory for data from file in disk

- Prepare a pointer to file

- Initialize the memory "buf"

- Allocate a file control memory in the heap
- Open the file "filename" for writing

- Copy the memory "buf" to file data (1024 bytes)

- De-allocate the memory
- Close the file

# Summary

| • Handling files for reading | • Functions                |
|------------------------------|----------------------------|
| Prepare a file pointer       | FILE * fp;                 |
| Open file                    | fp=fopen("filename", "rb") |
| Read from file to memory     | fread(...)                 |
| Close file                   | fclose()                   |

| • Handling files for writing | • Handling files for writing |
|------------------------------|------------------------------|
| Prepare file pointer         | FILE * fp;                   |
| Open file                    | fp=fopen("filename", "wb")   |
| Write from memory to file    | fwrite(...)                  |
| Close file                   | fclose()                     |