

s the most primitive one. Example: Compilers usually access files in this fashion.

#### Direct/Random access

Random access file organization provides, accessing the records directly.

Each record has its own address on the file with by the help of which it can be directly accessed for reading or writing.

The records need not be in any sequence within the file and they need not be in adjacent locations on the storage medium.

#### Indexed sequential access

This mechanism is built up on base of sequential access.

An index is created for each file which contains pointers to various blocks.

Index is searched sequentially and its pointer is used to access the file directly.

#### Space Allocation

Files are allocated disk spaces by operating system. Operating systems deploy following three main ways to allocate disk space to files.

#### Contiguous Allocation

##### Linked Allocation

##### Indexed Allocation

#### Contiguous Allocation

Each file occupies a contiguous address space on disk.

Assigned disk address is in linear order.

Easy to implement.

External fragmentation is a major issue with this type of allocation technique.

#### Linked Allocation

Each file carries a list of links to disk blocks.

Directory contains link / pointer to first block of a file.

No external fragmentation

Effectively used in sequential access file.