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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.
Inefficient in case of direct access file.
Indexed Allocation
Provides solutions to problems of contiguous and linked allocation.
A index block is created having all pointers to files.
Each file has its own index block which stores the addresses of disk space occupied by the file.
Directory contains