Hashing

Hashing:

- Hashing is a well-known technique to search any element among several elements.

- It minimizes the number of comparisons while performing the search.

Advantage-

Unlike other searching techniques,

- Hashing is extremely efficient.

- The time taken by it to perform the search does not depend upon the total number of elements.

- It completes the search with constant time complexity $O(1)$.

Hashing Mechanism-

In hashing,

- An array data structure called as **Hash table** is used to store the data items.

- Based on the hash key value, data items are inserted into the hash table.

Hash Table

A hash table is a data structure that store records in an array called the hash table.

Hash table can be used for quick insertion and searching.

Hash Key Value-

- Hash key value is a special value that serves as an index for a data item.

- It indicates where the data item should be be stored in the hash table.

- Hash key value is generated using a hash function.

Hashing Mechanism