Employee Management System

1. Understand Array Representation:

* Arrays are contiguous blocks of memory that store elements of the same data type.
* Advantages of using arrays are:
* Elements can be accessed directly using their index.
* Arrays allocate memory in a single block, reducing overhead.
* Elements are stored sequentially, which is useful for traversal.
* Array elements are adjacent in memory.
* Easy to declare and use.

1. Setup:

* A class “Employee” with attributes like “employeeid”, “name”, “position”, and “salary” was created.

1. Implementation:

* An array was used to store employee records.
* Methods to “add”, “search”, “traverse”, and “delete” employees in the array were implemented.

1. Analysis:

* Time Complexity:
* Adding an employee: O(1)
* Searching for an employee: O(n)
* Traversing all employees: O(n)
* Deleting an employee: O(n)
* Limitations of arrays:
* Arrays have a fixed size once created.
* Adding/removing elements requires shifting other elements.
* Resizing an array dynamically is not easy.
* Arrays store elements of the same data type.
* Arrays are efficient for direct access but less so for dynamic operations.