**Exercise 4: Employee Management System**

Sequentially stored elements of the same data type are kept in contiguous memory blocks called arrays. Their index provides direct access to elements, making it possible to quickly retrieve individual employee information, which is their main benefit for personnel management. They are therefore effective in situations where data is accessed in a sequential manner. Their suitability for dynamic employee management demands is however limited by their fixed size and inefficient insertion/deletion processes.

To add an element or object at a particular index, the Time Complexity is O(1).

For search, if the search is linear or the array is unsorted, i.e searching in an unsorted array it would take O(n).

For sorted array, the best search is Binary search. Because, the Time complexity for binary search is O(log n).

Arrays have fixed size, expensive insertions and deletions, and homogeneity; yet, they are effective for direct access to elements. They perform best when data is handled sequentially, random access occurs frequently, and data quantity is predictable. However, other structures like linked lists, stacks, queues, or hash tables are frequently better appropriate for dynamic datasets, frequent updates, or a variety of data kinds.