

SUBJECT: Data Structures and Applications [18CS32]

Batch: 2020_2024

Academic Year: 2021 - 2022

Date: Oct 7, 2021

Topic: Role-play - Comparison between Bubble sort and Insertion sort

The role-play conducted by the 3rd A section of the CSE department at BIET provided an interactive and practical learning opportunity to compare the Bubble sort and Insertion sort algorithms.

Bubble Sort is a simple sorting algorithm that repeatedly steps through the list to be sorted, compares each pair of adjacent items and swaps them if they are in the wrong order. The algorithm gets its name from the way smaller elements "bubble" to the top of the list. The algorithm has a time complexity of $O(n^2)$ in the worst-case scenario.

Insertion Sort, on the other hand, works by iterating through the list of elements, comparing each element with the previous one, and swapping them if they are in the wrong order. Unlike Bubble Sort, Insertion Sort starts at the beginning of the list and gradually builds a sorted sublist. The algorithm has a time complexity of $O(n^2)$ in the worst-case scenario.

Through the role-play, the students were able to understand the working nature of these sorting algorithms and how they differ from one another. This activity also helped the students to gain a better understanding of the importance of sorting algorithms in computer science and their applications in real-life scenarios.

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