

Heaven's Light is Our Guide
Rajshahi University of Engineering & Technology
Department of Computer Science & Engineering

Lab Manual

Course Code: **CSE 1203 (Sec A)**
Course Title: Sessional based on CSE 1201
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CSE 1202 (Data Structure Lab)
Module 7 [Sorting]: (for Week 7)

Topic 1: [Insertion Sort]

- i) Draw flowcharts for insertion sort
- ii) Sort the array $ax[7]=\{10,78,32,90,20,19,25\}$ using insertion sort algorithm. Write the content of $ax[]$ after each pass (iteration).
- iii) Find the complexity of the algorithm

Topic 2: [Selection Sort]

- i) Draw flowcharts for selection sort
- ii) Sort the array $ax[7]=\{10,78,32,90,20,19,25\}$ using selection sort algorithm. Write the content of $ax[]$ after each pass (iteration).
- iii) Find the complexity of the algorithm

Topic 3: [Quick Sort]

- i) Draw flowcharts for Quick sort
- ii) Sort the array $ax[7]=\{10,78,32,90,20,19,25\}$ using quick sort algorithm. Draw the sequence of function calling diagram, $QS(a,p,r)$.
- iii) Find the complexity of the algorithm

Topic 4: [Merge Sort]

- i) Draw flowcharts for Merge sort
- ii) Sort the array $ax[7]=\{10,78,32,90,20,19,25\}$ using merge sort algorithm. Draw the sequence of function calling diagram.
- iii) Find the complexity of the algorithm