Lab 5: Implement Binomial Heap

Lab Objectives: To study advanced data structures and their implementations and applications.

Lab Outcome:

- Solve problems using data structure.
- Analyze algorithms with respect to time and space complexity.

Perform the following operations:

1. Create Binomial Heap
2. Insert keys in Binomial Heap: insert a node in Binomial Heap
3. Find Minimum key of Binomial Heap
4. Unite two Binomial Heap: Take Binomial Heaps as parameter and unite it.
5. Extract Minimum Key
6. Decrease Key
7. Delete Key

Submission Guideline:

1. Write a report including the following points:

Title, Operations & its time complexity, Application of Binomial Heap (in detail), Conclusion.

2. Upload the Zip File, contains code file (.java/.cpp/.py/.c), Screenshot file and a report (PDF).
3. Ensure the code is well-commented and modular.