**Design and Analysis of Algorithm**

**Experiment No. : 8**

**Write a program to implement Huffman trees using greedy techniques.**

Experiment No. 8

1. **Aim:** Write a program to implement Huffman trees using greedy techniques.
2. **Algorithm**

Huffman Coding is a technique of compressing data to reduce its size without losing any of the details. It was first developed by David Huffman. Huffman Coding is generally useful to compress the data in which there are frequently occurring characters.

**Huffman Coding Algorithm**

1. Create a priority queue Q consisting of each unique character.
2. Sort then in ascending order of their frequencies for all the unique characters:
3. Create a newNode
4. Extract minimum value from Q and assign it to leftChild of newNode
5. Extract minimum value from Q and assign it to rightChild of newNode
6. Calculate the sum of these two minimum values and assign it to the value of newNode
7. Insert this newNode into the tree
8. return rootNode
9. **Conclusion and Discussion:** Hence we have implemented Huffman trees using greedy techniques.