Compression Portal Implementing Huffman Coding

Huffman Coding is one of the standard compression methods with a variety of applications.

- Huffman Coding is a lossless data compression algorithm where each character in the data is assigned a variable length prefix code. Encoding the data using this technique where the least probable character gets the largest code and the most probable one gets the smallest code is very easy and efficient.

In this project of Data Structures and Algorithms, we implement the algorithm of Huffman Coding for compression of data input by user (text/image) on a web-based portal.

- Data Structures implemented –
1. Priority Queues
2. Trees
3. Heap

The generated codes are optimal in the sense that the length of the binary code is directly proportional to the frequency of its occurrence in the given sequence.

- Key features of the project-
1. Option to select type of input
2. Frequency table for text input
3. Image Compression Code Output for image input.