

LAB - 6

Greedy Methods

(Fractional knapsack problem, Activity selection problem, Huffman's code)

PROGRAM EXERCISE

Lab. Exercise (LE)

- 6.1** Write a program to implementation of **Fractional Knapsack algorithm**.

- 6.2** Write a program to implement the **activity-selection problem** stated as follows:

You are given n activities with their start and finish times. Select the maximum number of activities that can be performed by a single person, assuming that a person can only work on a single activity at a time. Example: Consider the following 6 activities (0, 1, 2, 3, 4, 5). $\text{start}[] = \{1, 3, 0, 5, 8, 5\}$; $\text{finish}[] = \{2, 4, 6, 7, 9, 9\}$; The maximum set of activities that can be executed by a single person is {0, 1, 3, 4}.

- 6.3** Write a program to implement the file or code compression using **Huffman's algorithm**.