



ACADEMY OF TECHNOLOGY

Lab Assignment (Day 6)

Paper name: Design and Analysis of Algorithms Lab
Code: PCC-CS494
Discipline: CSE

Semester: 4th
Time: 2 Hours

Date: May 28, 2021

1. Write a program in C or C++ to implement Heap Sort algorithm.
2. Write a program in C or C++ to implement Fractional Knapsack algorithm. Find an optimal solution to the knapsack instance $n = 7$, $W = 15$, $(p_1, p_2, \dots, p_7) = (10, 5, 15, 7, 6, 18, 3)$, and $(w_1, w_2, \dots, w_7) = (2, 3, 5, 7, 1, 4, 1)$.
3. Write a program in C or C++ to implement Job Scheduling algorithm. What is the solution generated by the function JS when $n = 7$, $(p_1, p_2, \dots, p_7) = (3, 5, 20, 18, 1, 6, 30)$, and $(d_1, d_2, \dots, d_7) = (1, 3, 4, 3, 2, 1, 2)$?