CF212 - Programming Projects

thangdn - January 7, 2018   Name: _____

1 Project list

1.1 CF212-01: Mini Search Engine

The search engine should be able to "quickly" find out all occurrences of a phrase in a set of 50 given text files written in English. Use any data structure and algorithm of your own choice.

1.2 CF212-02: Event Scheduling

Given a set of N events, e.g., events in college festival, each student is asked to choose M events of his/her choice, in order of decreasing preference. If there are K slots available to schedule the events out of which at most P slots can be held in parallel, output a schedule that maximizes the happiness of most students. You are free to choose the definition of happiness as long as the definition is reasonable. The algorithm should work for any given N, M, K, P and the preference list of any number of students.

1.3 CF212-03: Text File Compression

The compressor should be able to compress text files written in English, and the compression ratio (ratio of the original file size to the compressed file size) should be comparable to the freely available file compression software. Use any algorithm and data structure of your choice.

1.4 CF212-04: Spell Checker

The spell checker should be able to "quickly" find out all spelling mistakes in a given text file written in English. Use any data structure and algorithm of your own choice.

1.5 CF212-05: Travelling Salesman Problem

Given a set of cities and distance between every pair of cities, the problem is to find the shortest possible route that visits every city exactly once and returns to the starting point.

1.6 CF212-06: Expression evaluation