School of Engineering and Applied Science
Ahmedabad University
ICT - Semester – I
ICP Project Definitions

P1 Timetable Generator

The main objective of this application would be automatically generate academic timetable based on the given resources and set of constraints. Following inputs should be taken by the system while generating the time table:

- Resources – Total available resources. For example, total rooms, labs, faculty members, TA, etc.
- Constraints – List down the constraint associated with each resource.
- Allocations – Details regarding the classes, subjects and faculty members allocated for teaching these subjects.
- Preferences (optional) – List down the preferences if any for a given resource or association of resources.

Based on the above mentioned inputs the system should be able to generate one or more possible time tables. In case the system is not able to generate a time table, it should output a draft timetable indicating the conflicts.

P2 Identifying parts of speech

Group of letters form a word and group of words form a sentence following the grammatical rules of the language. Each word in a sentence contributes differently to the structure of sentences – it can be noun, pronoun, adjective, adverb, verb, article, preposition, interjection or conjunction. The application should be able to segregate words of a given sentence into above stated classes. The task of classification becomes challenging by the fact that a word might fall into multiple classes, based on the context in which it is used in the sentence. The application should implement an algorithm which can help resolve this conflict. In order to successfully complete this project, a student would require sound understanding of topics like file I/O, pointers, linked list and the rules of English grammar.

Useful resource: http://www.edb.utexas.edu/minliu/pbl/ESOL/help/libry/speech.htm You may find many such resources on the web to get acquainted with the topic.

P3 Spell checking and suggestion

In current time, every word processor is equipped with high-end spell checking algorithm, integrated into it. In this project, the task would be to develop a simple tool to implement spell checking and suggestion functionality. The application should take a file provided by the user as an input and generate a list of incorrect/misspelled words along with suggestions for correcting each such word. One can use Linux word database to build the essential dictionary. The students may need to implement the concepts of pointers, file I/O, linked lists, and/or any other data structures in order to complete this project.

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