Automated examination timetabling solution construction using fuzzy approach

Abstract

Examination timetabling is of much interest and concern to academic institutions. The basic problem is to allocate a timeslot for all exams within a limited number of permitted timeslots in order to find a conflict free timetable. This assignment process is subject to 'hard' constraints which must be satisfied in order to get a feasible timetable, such as no student is required to sit two exams at the same time. In addition, it is also important to build a good quality examination timetable that considers not only the administration requirements, but also takes into account lecturers' and students' preferences. These requirements are generally considered as 'soft' constraints which are desirable (but not essential) to satisfy. As reported by Burke et al. (1996), these requirements vary from one academic institution to another.