

A MODIFIED FLY-EVOLUTIONARY ALGORITHM IN A UNIVERSITY UTARA MALAYSIA EXAMINATION ENVIRONMENT.

At present, Universiti Utara Malaysia (UUM) use manual examination timetabling schedule prepared by Hal Ehwal Akademik examination unit (HEA) officer for conducting the examination using Ada Semantic Interface Specification (ASIS) program. The specific problems of this system are time consuming which takes around two weeks to prepare draft examination timetable and the total number of students with many courses make it unrealistic to be solved manually for distributing exams evenly. To solve this problem, this study propose a new extended modified fly-evolutionary algorithm to develop a prototype, which has been practically tested on Semester I (A131), 2013/2014 data set. This is an automatic web based application for producing a feasible high quality examination timetable which satisfies all of the hard constraints as well as the soft constraints as much as possible. The existing schedule has many constraints which have not been modelled before, and thus the propose algorithm can address those constraints properly by figure out the Z value for spreading students, lecturers, rooms and time. The outcome of the research would offer a set of benefits for the HEA unit of the university to produce a high quality exam timetable in a shorter time frame as well as for the students to reduce their examination stress.