Generic Model for Timetabling Problems by Integer Linear Programmimg Approach

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Abstract : The agenda of showing the scheduled time for performing certain tasks is known as timetabling. It widely used in many departments such as transportation, education, and production. Some difficulties arise to ensure all tasks happen in the time and place allocated. Therefore, many researchers invented various programming model to solve the scheduling problems from several fields. However, the studies in developing the general integer programming model for many timetabling problems are still questionable. Meanwhile, this thesis describe about creating a general model which solve different types of timetabling problems by considering the basic constraints. Initially, the common basic constraints from five different fields are selected and analyzed. A general basic integer programming model was created and then verified by using the medium set of data obtained randomly which is much similar to realistic data. The mathematical software, AIMMS with CPLEX as a solver has been used to solve the model. The model obtained is significant in solving many timetabling problems easily since it is modifiable to all types of scheduling problems which have same basic constraints.