Activity Scheduler

A schedule-generating web application

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The Problem

Student organizations help develop their members through activities and projects. However, coming up with a conflict-free schedule of activities can be time-consuming, complicated and difficult to coordinate.

Factors that Affect Activity Scheduling:
- Coordination among committees
- Conflicting times
- Conflicting venues
- Target participants of each activity
- Restricted schedule dates
  e.g. activity ban
- Unadvisable schedule dates
  e.g. during midterms week

Because there are so many factors to consider when scheduling activities, organizations sometimes end up overlooking some of them, which causes problems when about to implement these activities.

Effects of Conflicting Activity Schedules:
- Unavailability of participants
- Unavailability of officers
- Unavailability of speakers
- Conflicts with other activities
- Last minute changes

These are problems that often end up ultimately causing the activity to be rescheduled, to lack participants or to not push through at all.

Our Solution

To address this problem, we decided to develop a web application that makes use of a genetic algorithm to generate a schedule automatically, while taking into account many of the factors previously mentioned.

Variables Our Solution Considers:
- Possible activity dates and times
- Target participants of each activity
- Restricted dates and times of the schedule and of each activity
- Venues of each activity

It evaluates generated schedules given these variables, and, through that, outputs a schedule with minimal conflicts.

Schedule Characteristics Our Solution Avoids:
- Conflicting times (especially for activities with similar target groups)
- Conflicting venues
- Prohibited activity dates and times

Benefits of the Automation of Activity Scheduling:
- Conflicts are prevented early on
- Less schedule adjustments later on
- Scheduling process is simplified

Through this application, student organizations will be able to devote less time to scheduling and more time to providing quality activities to their members.