Class Scheduler

Paul Senatillaka  
OPL  
Project Proposal

My project idea is to create a tool that will help students at UML create class schedules. With a restricted schedule, I sometimes spend a good deal of time working out different combinations of class schedules to find one that is right. My idea is to have a scheme program to scrape the registrar's website for the class schedules, then allow the user to input a list of desired classes. The program will output all possible permutations of schedules with those classes. This seems like a great task to apply functional programming to. Additional features might include a weighted priority queue for storing desired classes, so if there are conflicts in time slots, higher priority classes win.

The UI will be built with html in a scheme web server. This was chosen as to have the application accessible to a greater audience. HTML forms will be used to collect the list of desired classes. The parsing will be done using a combination of the net/url and html libraries. The net/url library allows me to grab the raw html text from the registrar's site. The html library allows me to extract data out of html elements. The parser will go through each department's schedule in the registry website, and compile a complete list of all class schedules. For version one of this project, I will parse this on each schedule request from the end user. If I have time, I plan to implement local caching using one of the file or db scheme plugins, to store my data structs. Once the master schedule is collected and parsed, all possible permutations of the class schedule will be generated and displayed to the user in the browser. The html library will be used again to construct the html output.