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COP3503 Term Project Final Write-up

Deadline #3: Implementation and Testing due at 8:30am on Monday, Dec 7, 2015

Basic Project Overview:

The program utilizes HTML files containing the courses offered by each department from the UF Registrar website in order to organize and construct a viable schedule for a user (student) based on the courses the student hopes to take. The system avoids scheduling conflicts by using an algorithm to prevent two classes from being scheduled at the same time. The course prefix for a desired course determines which department pages are accessed and parsed.

Lessons Learned During This Project:

We learned how to parse HTML code and its underlying elements. This helped to strengthen our knowledge of utilizing string methods to access and modify the contents of strings. In addition, the project helped improve our use of classes and objects due. The wide use of linked lists within classes also helped us improve our proficiency with linked lists.

In addition, we learned about working with other people to accomplish a goal. We also learned that sometimes projects can also be a bit overambitious despite the amount of resources and initial expectations.

Troubles We Ran Into During This Project:

At first we planned to use a web scraper and an external library, libcurl, to access the proper HTML files from the Internet each time the program ran; however, we were unable to get this to

work properly so we switched to Plan B: saving all the HTML files into the folder with the program and reading in the necessary files for each course.

Additionally, we realized that some prefixes are offered by multiple departments (or no currently existing departments) and that each department offered multiple prefixes. For this reason, we hardcoded the possible departments for each of the possible prefixes.

Future Improvements:
We had initially planned to include additional options such as a preferred professor or times when the class was not offered; however, we ran out of time and/or were unable to properly implement these features.

Additionally, the program could be revisited to include solutions to problems that could arise from the possibilities we neglected in our assumptions. For example, a method for determining distance between buildings for classes would be useful, although relatively complicated, to prevent the scheduling of consecutive classes that are extremely far apart. Additionally this assumes that the student possesses all of the prerequisite courses and is eligible to enroll in all of the courses, neglecting the possibility for certain sections to only be offered to certain groups of people, such as students majoring within a particular department.

Lastly, the implementation of a webscraper would assist in making this program easier to change from semester to semester. With the current setup, all of the department HTML files must be saved in the folder with the program. However, this problem could be avoided by saving the program in the same directory as the department HTML files on the UF Registrar's website.