CS 4523 B

Spring 2020

Professor Strauss

# Team B01 - *A Plan*


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**Motivation**

As a student, one of the most stressful jobs is creating a schedule for my next semester. I would spend two hours going through Albert, using the requirements needed to graduate to direct my class search. I start to formulate a schedule, mixing required and elective courses, and checking what prerequisites or permission codes are needed for each. I remember that there was one class I wanted to take which would be helpful to the career I'm pursuing. That class however is said to be extremely hard, and I need to make sure my GPA is a 3.0 for the job hunt. Maybe I can go and check rate my professor and see if any of my other course have easier teachers, I might be more willing to take that class then. However, all the ratings are for other classes this teacher has taught, some of them aren't even at NYU. There is not enough information to make to determine if I should take the course; I'm not going to risk it. I finally create a schedule that meets my requirements, based on what little feedback I was able to get from my friends, I believe I have the right balance of required and elective courses for this semester. Now let's fast forward to the date I confirm my schedule, I just realized that one of the classes I have in my schedule is closed out. I must go back into Albert and find a new course. I find one only to realize it conflicts with another class I have in my schedule. Before I know it, I'm spending another two hours on Albert completing the process all over again.

The perfect application for me, would be a scheduling tool that made schedules automatically for me based on my current curriculum and personal preference. I would go and specify my major to the program, then confirm what are the most important things to me when creating a schedule. Maybe I like to take classes that will give me

skills needed for my career, or I like a lot of breaks throughout the day, or I just want to have the easiest semester possible. It's important for me to have a 3.0 by graduation, this system will also be able to help me strategically set up my courses so that I'm more likely to graduate with the appropriate GPA.

**Required System Functionality**

1. Show an operational "course search" functionality using a NYU course database. Retrieved data includes instructor, meeting dates and times, pre-requisites, permission code requirements, status (open/wait-list/closed), classroom assignment.
2. Show the "my schedule" options based on user input of required courses for the upcoming semester. Include schedules with different electives. Inputs include start times, end times, days off, provide breaks between.
3. Update the course database so students get the most accurate data regarding the classes they can take.
4. Update the user on the status of courses in their created schedules. For example, if a closed course is now open, the user will be notified via email of the status change and how that affected the hierarchy of created schedules.
5. Return a list of course numbers when a final schedule had been selected by the user. This list can be copied and pasted into Albert to enroll in the chosen classes.

**Assumptions/Constraints**

- NYU IT course data is missing key points.
    - Meeting summary: NYU IT agreed to give us a mock database used during hackathons hosted at the school. That data was received February 5th, 2020. The database was missing some key points such as the days and times classes would start. Data scraping or manual input will need to be utilized in order to complete the information.
- Next steps
    - Prototype the schedule making algorithm.
    - Complete data for the course database.
    - Design a UI for the system.
    - Update current documentation for the system.

**Deliverables**

| Deliverable | Date |
|---|---|
| Team Selection Form | February 16, 2020 |
| Project Proposal | February 19, 2020 |
| Requirements and Analysis Documentation (RAS) | February 19, 2020 |
| Project Management Plan (SPMP) | February 26, 2020 |
| Design Description (SDD) | March 4, 2020 |
| Design Document Final (w/Code) | April 22, 2020 |
| Implementation/Demonstration Start | April 22, 2020 |
| Formal Oral Presentation | TBD |