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Project Proposal: **Phil the Bot**

Goal of the project

Implement a chatbot interface that helps UChicago students with course selection and schedule planning.

Source of data

- University of Chicago Course Catalog
- Stellic myPlanner web program (will need Shibboleth access)
- Bluera Course Evaluation database
- User string input (including past queries)

Implementation is divided into two stacks: ***Front-end*** and ***Back-end***

Front-end deals with the actual ChatBot UI/UX that handles string inputs and generates queries into the database

- Primarily **Chatterbot** python package implementation (without ML feature)
- Consider limited user inputs and direct user to pre-set suggestions for questions
- Querying keywords mentioned in the input (eg. prerequisites, ABCD 12345, major etc.)

Back-end deals with the construction of the database itself consisting of all the information

- Web-Scraping data sources and building SQL tables that join query keyword strings to tables containing information that would be part of the answer.
- Use **Selenium** to auto-input Shibboleth login credentials and access user-specific information w.r.t
 - classes taken in the past
 - declared major
 - Stellic myPlanner (requires Stellic API implementation)

Tentative Project Timeline

February 9th (Wednesday, Week 5)

- Detailed outline of SQL databases - (which query accesses and joins which database(s))
- Figure out Selenium information for login credentials
- Exact list of questions the bot is capable of answering

(Limited work, midterm season)

February 21th (Monday, Week 7)

- Finish backend implementation as detailed above
- Should have initiated Bot implementation

By 2nd check-in session, Week 8

- Should have completed implementation (or in the process of finishing front-end)
- Debugging
- Consider extensions if possible

Some **sample questions** the bot will be able to answer:

- Who is teaching CMSC 12100 this year?
- When is DATA 11800 offered (which quarters)
- Who all have taught ECON 20100?
- Can I enroll into study abroad?
- How many more (minimum no.) quarters to complete the major
- When can I take an elective
- How much of the core do I have remaining
- How many quarters from now can I take 3 classes
- Are you open to summer classes

Extensions:

- Sentiment analysis of course evaluations
- Generates possible course schedules for user based on major, Stellic etc