Final Project Proposal

My idea for this project is to create a webpage where the user can select the identifiable information describing a set of bacterial genomes. I hope to integrate mySQL, Python/CGI, and HTML (JS/JQuery if needed) to make this fully functional.

**Webpage user usage:** The user will have the option of entering the genome wanted (I’ll have made the Chado for 3-4 bacteria) and selecting features that would be returned in a table or an excel/csv file (if I can figure that part out, I’ll do it. If not I’ll stick with output on the webpage). The list of features would be Accession ID (maybe Entrez ID too? And a link to that page?), start and stop locations, %GC, genome size. I did something similar for work (although it was through argparse so pretty easy, and it was nice to know some info to do primer design and all that).

**Webpage aesthetics:** I’ll try to make it look cute. Like add some nice boxes through CSS and colors and all that jazz (I’ll figure it out when I get to that point tbh)

**My end:** I’ll have to make a database for each genome with the information needed, if there isn’t one already available (bc why would there something already made to make my life easier). The CGI script will have mysql connected and directed to the database(s) to retrieve info that was selected (seeing how it took me days to figure out autocomplete and I still haven’t figured it out at time of writing, this will be very interesting). The CGI script will probably be referenced by JS/JQuery so that I can have autocomplete functions and maybe a pop up if the user tries to choose a genome that isn’t listed. The html file will reference .js file and have the form where the user can input the genome and select what aspects they want returned. There will also be an area where the .js output will be appended on the webpage. I will probably also do the styling here as well instead of having a separate css file, unless it’s better to have a css file and pull that in.

**End goal:** I want to create a way where users can retrieve information either for fun, or designing primers (like how I do for work), or sequence analysis for whatever reason.