Maintenance plan

Hosting

The cost of hosting our project should be fairly minimal. As mentioned, it is currently being hosted on GitHub Pages and is therefore accessible to anyone on the internet for free indefinitely. GitHub Pages also supports custom domains, which would allow our project to be hosted on a domain other than github.io for only the cost of the domain name. The custom domain option should be available on virtually any hosting provider. A typical domain name costs $10-$2 per year. I checked "kugradplan.com" on GoDaddy, and it is available at a price of $12 the first year and $18 for subsequent years.

Another option for hosting our project would be on KU servers. This would make sense as it is a project by and for KU students. The original GradPlan application is also currently hosted on the EECS servers (gradplan.eecs.ku.edu). This hosting option should not have any direct costs. As an example, Drake worked with a professor to build a project for a class on a ku.edu subdomain. This server was provided by KU to the professor for free and came with a full-fledged cPanel backend, which would support future development of a database instead of storing the course and major data in the JavaScript source directly. Static website hosting is also provided by KU, such as the people.eecs.ku.edu site we uploaded our Lab 8 to, which any EECS student can use for free and would support our project in its present form.

One last option to consider for hosting is the big-name cloud providers. According to Amazon, a static website on AWS should cost between $0.50 and $3 per month to host. Based on Drake's experience on the KU Solar Car team, it is possible to host a website that has a backend entirely within the free tier as long as traffic is low enough. The traffic to this application should be fairly minimal as its scope is currently limited to EECS students. In summary, hosting and domain name costs for this application are negligible compared to the cost of developers.

Developing

To maintain the codebase, i.e. fix bugs and add enhancements, developers would be required. This does have to be too large of an expense however. From Drake's experience working on a project for a KU professor, students can be paid $10 per hour to work up to 10 hours per week on an application. I am sure a large number of freshman and sophomores would jump on such an opportunity as a resume builder and also just for the fun experience of working on a real project. Student hourly developers also have no other costs besides their salary (e.g. health insurance, computers, or office space).

Given it took approximately 200 total hours to develop projects 3 and 4, and a significant portion of this time was spent on things that do not need to be repeated such as documentation, a single part-time student should be more than enough to keep this project running in the future. The most likely source of maintenance for this project in its current form is updating the data as the requirements of majors and courses change over time. Currently, this process would require editing the code, and therefore a future enhancement a developer could make would be an admin interface which would allow staff such as Leslee Smithhisler to update these requirements, reducing the reliance on developers. Another possible source of maintenance is bug fixes as new versions of web browsers are released, as this is a web-based application and browsers change over time.

I believe this workload should all fall within the ~160 maximum hours per week a single student developer could work per semester, resulting in a maintenance cost of at most 160*2*10 = **$3,200 per year**. This is, however an upper bound, and would likely cost much less to maintain on average. This cost could be easily justified if the application helped the School of Engineering with retention by even a small number of students.