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SUBJECT: Phase 1 Report
PROJECT: Formula 1 Internet Database
GITHUB: <https://github.com/UT-SWLab/TeamE2>
CANVAS TEAM: Team E2
WEBSITE LINK: <https://f1-app-292016.uc.r.appspot.com/>

INTRODUCTION

This document serves as documentation for the development process of Team E2's EE 461L project, a Formula 1 Internet Database. The report includes information on the intended users, features, design, testing methods, data models, and tools used.

MOTIVATION

The purpose of the site is to display Formula 1 statistics, aggregated from multiple public APIs. The site features historical and current data for models ranging from drivers to constructors to circuits. The goal of the website is to combine all these components into one easy to access site.

Users

Users that would benefit from this site include Formula 1 team members, Formula 1 fans, sport analysts, or anyone else looking to improve their understanding of Formula 1. Additionally, any other developers can utilize our collected data sources should they want to create their own database.

REQUIREMENTS

The team utilized various project planning methods to ensure an organized development. By planning out the project in a careful manner, the team was able to ensure all required features were included in the website.

Phase 1

Phase 1 involved organizing the team compact, discussing possible ideas for the site, and laying out the groundwork for the project development. It included the initial, static creation of the website, with some preliminary data collected in order to generate page examples for the various data models.

User Stories

- As a user, I want to view a racer's win history, team, age, and all personal information.
- As a user, I want a home page so that I can navigate between all of the various pages that are available.
- As someone with poor eyesight, I want the user interface to be simple and easy to navigate.
- As a user, I want to view the web application's data sources and method of retrieval. This is for my own verification and assurance.
- As a user, I want to view a constructor's current and former team members, race statistics, and nationality.

DESIGN

TESTING

MODELS

TOOLS, SOFTWARE, AND FRAMEWORKS

SOURCES

REFLECTION

After each phase, the team took time to reflect on what we learned, things we struggled with, things that we need to improve, and things that worked well. By taking time to analyze our past work, the team can steadily improve and adapt to ensure a smooth development process.

Phase 1

In phase 1, the team created a simplified, static version of the website. While the team had completed tutorials on using Bootstrap and Jinja templates in class, this phase saw us learn how to use these tools in much more effective ways. Bootstrap was used to display multiple objects on the page in such a manner that resizing the window/screen allowed for the components to dynamically adjust themselves. The team used Jinja to create more complex templates for the models and the model instance pages.

Along the development process, there were certain obstacles that the team struggled with along the path to completing the phase requirements. These struggles include learning the more complex Bootstrap components (e.g. keeping Bootstrap cards not only the same width, but also the same height), writing the initial scrap for harvesting the data from our APIs, getting the web page CSS to display our components in the desired way, learning how to use more complex Jinja components, and integrating Github within our Slack.

Aside from technical difficulties, there were also some things that the team realized we must improve on for future phases. Namely, the team needs to learn to communicate more often, respond in a quicker manner, and as a whole, begin work on the project earlier.

Nevertheless, there were many things that the team did that ended up working very well. The team will keep this in mind as the project development continues. These things include the utilization of Slack for team communication/link compilation, using the Github issue tracker to ensure all requirements are met, using Github user stories to easily create functionalities and implement features, hosting the twice-weekly meetings on Zoom, and using the tools taught in class (Flask, Bootstrap, and Jinja) to create the website.

EE 461L Team Compact (Team E2)

When:

Mon, Wed 2-4 pm

How to make decisions:

Decisions will be made with a vote that must be $\frac{3}{4}$ pass. In the case of $\frac{2}{2}$, flip a coin and move on.

How to divide work and set deadlines:

We will volunteer for work, and then distribute the remaining equally based on experience. We will vote for a leader. The leader will set project deadlines, with a minimum of 2 days before the actual course deadline. This is to allow us to have adequate time to review all work before submission.

Punishments:

If you are late on a deadline, you get the last pick for work next week and you have to write an increasing amount of the written reports. Plus you must apologize for your incompetence in the next Zoom meeting.

Resolving Conflicts:

In the case of a conflict, members should first attempt to resolve it through respectful discourse. A team member should never, for any reason, disrespect or criticize another member. If a conflict cannot be resolved through a respectful discussion, a neutral third party (another team member or, if necessary, Prof. Eberlein/a TA) will be consulted as an arbiter.

Communication:

The Slack workspace will be the main form of communication. Messages can be sent as often as needed, and while teammates may be busy at times, they should at least respond with an acknowledgment that they have seen the message. If teammates will be unavailable for contact for an extended period of time (e.g. broken phone), they should notify the group ahead of time or notify the group with a Canvas message.

Code Sharing:

Code should be kept and updated through the team Github to ensure consistency. All issues will be tracked on GitHub.

Team Relative Strengths:

Edie: Python, CSS, HTML

Sam: Javascript, Typescript, Angular, Python, CSS, HTML

Alan: Python, Javascript, CSS, HTML

Kevin: Python, Javascript, CSS, HTML