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Introduction

The project that we will be working on is the creation of a genomic visualizer to be used by genetic researchers. The product will have, at an absolute minimum, an interactive design, a semantic zoom functionality, and the ability to parse and display a phylogenetic tree from given data. In addition, the user must be able to see individual mutations and annotations. Functionalities that could be added to the product, but are not compulsory include the implementation of query tools, meta-analysis, and other data integrations for the convenience of the user. While it is required that our goal be to have the minimal implementation, we are also looking to add all of the additional aspects listed above, as well as a unique style of visualization for the data. This unique visualization takes the form of a ribbon layout at the higher level of the semantic zoom.

Product

Epics

1. As the user, I must be able to interact with the user interface to navigate through the visualization and with the user interface so that I can easily understand the data that I had given to the product.
2. As the user, I must be able to zoom in and out on the visualization while the data that is displayed is dynamically changing to be only the most relevant for my current view so that I can have an easier time at navigating through and understanding the data.
3. As the user, I must be able to view a visual representation of a phylogeny so that I can give the program the data of the phylogeny and have is properly displayed on the screen.
4. As the user, I must be able to give the product my data and be able to see a corresponding visualization of that data so that I can then navigate through the representation and intuitively gain an understanding of the data that was given.

Release Schedule

Every Friday there will be a new release of the current working version of the product. This means that on Apr-29, May-6, May-13… up until Jun-17 we will be releasing a version of our product that is built up on the previous version.
On the same days as the releases, with the exception of May-6, we will be having a meeting with the teaching assistants as well as Thomas Abeel who is the acting representative for our customers. Meetings with the actual customers will be happening but do not have concrete dates yet.
In line with scrum methodology we will be treating each week as a sprint and therefore will be creating sprint plans and reflections for those sprints. These will be created and made available on the same day as the release of the working version and after the meeting with the teaching assistants / customers.

Release Goals

Apr-29 : By the first release we want to have the initial working version created. This also means that we want to have all of the major epic essentially included in the product at this time, no matter how rough around the edges they may be.

May-6 : If there was anything that was not able to be implemented in the first week, it will be made the highest priority this week and will be completed before anything else is added to the product. Additionally, the initial implementations will undoubtedly need polishing up, so that will most likely have to take place this week. The priority of the polishing up will be have to be decided once we get more information from the customer.

May-13 - Jun-17 : Continue perfecting the product, using the feedback from the customer as the main decider for what we change and implement. Every week for the sprint plan we will do as we have always done and decide on what needs to be done and then by who and for how long. Each week we will focus on getting a working version out the door so that we don't fall behind in the feedback we can receive.

Product Backlog

User Stories

1. As the user, I want to be able to go from a ribbon view of the data to a graphical view of the data by zooming in on it so that I can better understand the data.
2. As the user, I want to be able to view additional information about individual mutations so that I can better analyse the data.

3. As the user, I want to be able to view meta data analysis of my input data so that I can better analyse the data.
4. As the user, I want to be able to easily navigate through my data without much restriction so that I can use the visualization in the way that I want.
5. As the user, I want to be able to quickly and efficiently input my data to the product so that I don't have to wait too long to see the visualization.

Definition of Done

Our definition of done is going to be based on these points:

- The product can parse in the data and display the corresponding visualization.
- The user is able to zoom in and out on the visualization with some sort of dynamic change in what is shown on screen.
- The code is well written and passes both in all our own tests and on travis.
- The code is well documented where it needs to be so that someone looking through the code is able to know what each aspect is for.