

EE / CPR E / SE 492 - sdddec20-22
DNA to Feature Models
Biweekly Status Report 6

10/27/2020 - 11/09/2020

Client: Dr. Myra Cohen

Faculty Advisor: Dr. Myra Cohen

DNA To Feature Models

The following report presents the progress of the senior design team for the project, DNA to Feature Models, in the past two weeks. This progress report also entails a partial recap of where the team left off from last semester.

Team Members:

- Abdul Rahman El Moughrabi - Developer/Documentation Management
- Ahmad Nazar - Team Leader/Developer
- Ahmed Alketbi - Developer/Debugger
- Hyegeun Gug - Developer/Web Management
- Prathik Nair - Debugger/Developer

Past Week Accomplishments:

The frontend plugin interface foundation has been established and a bridge between the frontend and backend has been completed. A problem regarding extending a feature in FeatureIDE arose however we quickly figured out what the files in FeatureIDE's source code were inferring,

Pending Issues

- Merging a plugin within FeatureIDE's plugin interface
- Using data to implement features in frontend with respect to FeatureIDE
- Refining output in frontend and adding more entities from backend to frontend

Individual Contributions:

Abdul Rahman El Moughrabi

In the past 2 weeks, I went over testing the plugin with Jubula and RCP testing tools. I generated some tests through Jubula because it's a great tool for creating tests that are specific to a plugin. It is also not entirely code based and gives the tester the ability to create tests from a user point of view to make testing more accurate. I also tried to combine both our plugins together to allow full functionality but have still not figured out how to.

Ahmad Nazar

For the preceding two weeks, I tested creating a Feature according to parameters specified in the source code of FeatureIDE. This task turned out to be challenging as countless errors made an appearance and led to making a template feature using database details a challenge. One other task I have completed for the past two weeks was completing the backend database and fully populating it with all necessary entities as recently updated by the online BioBricks Repository.

Ahmed Alketbi

In the previous 2 weeks, I worked on trying to edit FeatureIDE editor to add an option to add features from our plugins. The task was challenging due to minimal documentation on FeatureIDE's source code. I also tried combining our plugin with FeatureIDE but we all had failed attempts so far. We got an idea from our client, Dr. Myra, to form the XML file for feature models then import it manually in FeatureIDE as an alternative solution. I am currently working on this to figure out a way to create XML files with specific part types. I am also working on final tests with the XML Parser before integrating it with the backend. Most tests are done manually to check for the correct output because BioBricks' XML database is inconsistent with some part types.

HyeGeun Gug

For the past 2 weeks, I have finalized the options of importing the database to our front end. The problem we are still facing is to link FeatureIDE plugins to our plugin, which is a high portion of the program that would let our plugin build models. In the way of figuring it out, we have done multiple ways of importing changing the dependencies. Our final aim is trying the structure adding, instead of bringing in all the plugin to understand what takes to build models. In this way, we could make models in our plugin based on our database.

Prathik Nair

For the past 2 weeks I have assisted with the transferring bio bricks part files to txt files that are readable within our eclipse plugin. Alongside that, I used downtime to prepare my slides and talking points for our PIRM presentation. Over the next few weeks, my goal is to assist Ahmed with any help he might need, and to complete our final presentation requirements.

Team Member	Weekly Hours	Total Hours
Abdul Rahman El Moughrabi	6	38
Ahmad Nazar	6	33
Ahmed Alketbi	6	36
HyeGeun Gug	6	43.5
Prathik Nair	6	21

Plans of Action:

- Complete more experiments with plugin development
- Integrate FeatureIDE source code for adding feature using our database entities
- Build and export current product to see manifest options and dependencies
- Filter data going into frontend based on desired user category