Weekly Report

Team Dec 15-12: @PaniniJ

Week 8 + Spring Break: *Mar. 9nd - Mar. 22nd*

Advisor	Dr. Rajan	
Client	Dr. Rajan	
Team Members	Dalton Mills	*Webmaster*
	David Johnston	*Team Lead*
	Kristin Clemens	*Communication Lead*
	Trey Erenberger	*Key Concept Holder*

Weekly Summary

In the past two weeks, our focus was split between extending the capsule-generation prototype and starting to draft our design document.

Technical Progress

- Dalton wrote a lot of Thread Capsule generation code. More specifically, Threaded capsules will now extend the correct signatures, build procedures with ducks, and have enums for run() generated.

- David wrote the new `TypeCollector` class. It uses a pair of visitor classes to traverse a template class and find the set of types which are used in the definition of its interface. He also adapted some of the existing artifact generation code to use this `TypeCollector` class to import this set of types into a those artifact source files. He also contributed to the current work-in-progress design document.

- Kristin spearheaded the search for a design document template that would best fit the project given its research-focused nature. She helped prune out any unfit sections and added others, and otherwise contributed by helping determine which topics were within the scope of this semester's document as well as writing miscellaneous informational sections and editing others to help create a coherent style across the document. She also made efforts to better understand the fundamentals of

capsule-oriented programming and began the process of writing tests for the `capsule-generation` maven subproject.

- Trey pair programmed with Dalton to implement the procedure enum generation, procedure wrappers for capsule, and the run method in capsules. This involved reasoning about potential issues with different types of procedures, mainly how method overloading effects capsule generation.

Meetings

Weekly Administrative Meeting
Members Present: All
Additional Participants: N/A
Date & Location: Tuesday 10th of March; Molecular Biology 1414

Bi-Weekly Advisor Meeting

Members Present: None
Additional Participants: Dr. Rajan
Date & Location: Friday 13th of March; Atanasoff 101
Minutes:

- Dr. Rajan was not able to meet this week.

Weekly Collaboration Meeting (1 of 2)
Date & Location: Sunday 15th of March; Google Hangouts
Members Present: All
Additional Participants:
Minutes:

- Prior to the official meeting start time of 1PM, David and Kristin met to discuss the fundamentals of the Panini language and capsule-oriented programming.
- Dalton and Trey continued work on implementing capsule internal methods
- Kristin and David devised a list of terms to be defined in the software design specification; also a variety of project constraints.
- David discussed (things) with Dalton and Trey.
- Kristin began outlining the software design specification.

Weekly Collaboration Meeting (2 of 2)
Date & Location: Sunday 22nd of March; Google Hangouts

Members Present: All
Additional Participants:
Minutes:

- Time was primarily spent working on the software design specification.
- Together determined who would be best suited to work on which sections.
- Review of work done over spring break
- Discussed tentative plans for functionality to be implemented over the next week.

Individual Hourly Contributions (Across Two Weeks)

Trey Erenberger	12 Hours
David Johnston	15 Hours
Kristin Clemens	10 Hours
Dalton Mills	14 Hours

Culumulative Time Contribution

Trey Erenberger	83 Hours
David Johnston	98 Hours
Kristin Clemens	52.5 Hours
Dalton Mills	74.5 Hours

Tentative Plans for Week 9

At the most recent Sunday meeting, we identified a number of next steps for the next week.

- David is going to be working on some minor refactoring of helper methods involved in building capsules and other artifacts. This will be done on the `[capsule-generation/master]` branch. Once that is complete, he will then extend the work on the `[capsule-generation/type-collector]` branch so that it is used in all of the artifact generation components which require it but are not yet using it (e.g. the capsule interface maker). After this, he is going to start thinking more about the runtime and how a system of capsules should be started and stopped in an automated way.

- Dalton and Trey are going to continue their recent work on the branch `[capsule-generation/master]`, in particular, implementing the automatic generation of a capsule's `panini$run()` method, which is responsible for "unwrapping" and handing ducks and other messages delivered to the capsule's queue. Once this is done, they will next start thinking about how some of the artifact generation code should be refactored, in particular, how more consistent naming conventions can be used across these classes and how helper code can be be better reused.

- Kristin will continue her focus of writing tests that will assist with faster incremental development of the `[capsule-generation/master]` branch. Additionally she will be looking into refactoring the existing Maven project setup. While it may not be necessary to do it this week specifically, refactoring will almost certainly need to be done before the end of the semester. As time permits she will be adding content to the work-in-progress software design specification and preparing for a 10-minute presentation to be given next week in front of the Senior Design Project class.