Weekly Report

Team Dec 15-12 *Week 6:* Sep 27th - Oct. 4th

Project	@PaniniJ	
Team Members	Dalton Mills David Johnston Trey Erenberger	Webmaster Team Lead Key Concept Holder
Client	Dr. Rajan	
Advisor	Dr. Rajan	

Weekly Summary

This week we looked at implementing the planned static checks as well as some backlog enhancements that we had planned. We also evaluated our ability to test our project in light of the static checks and found that our original testing method does not allow for tests that are designed to fail.

We will need to continue implementing additional static syntax checks, but we will also need to turn our attention to providing better documentation in our code base that include example usage of the @PaniniJ jar. This is part of our 0.1.0 release goals.

Technical Progress

We have added additional functionality that allows us to utilize an instance of the processor to discretely process arbitrary files. This is different from our previous method which relied on Maven to build our test files. Our previous testing method meant that if Maven could build our testing templates successfully then our tests were successful. This meant that we could only design tests that were intended to be successful.

We implemented the following static checks:

- 1. Template only implements valid signatures
- 2. Template does not extend anything

- 3. Template does not contain a constructor
- 4. Template does not contain a public static void main method
- 5. Classes annotated with @Capsule have a valid class name.
- 6. Passive capsules must have one or more procedures
- 7. Template procedures do not have variadic arguments

We additionally implemented the Java 1.7 compliance enhancement from our backlog. This required the removal of certain usages of Java 1.8 Streams and Lambda expressions in both the processor and the runtime. We wanted this compliance to achieve parity between the viable compiler for the processor and the code that the processor produces.

The issue (#46) of a procedure returning a declared type without a no-arg constructor has been resolved. A declared return type which doesn't have a no-arg constructor is now marked as "unduckable".

Another example (Raytracer) was added as well. This example was sitting on an older branch and had to be brought up to speed. The example creates an Image of a 3d scene using raytracing.



Meetings

Bi-Weekly Advisor Meeting

Members Present: All

Additional Participants: Dr. Rajan

Date & Location: Wednesday 30th of September; Atanasoff 216 **Minutes**:

• Panini not discussed due to visit from Sandia Labs

Weekly Collaboration Meeting 1

Date & Location: Saturday 3rd of October; Google Hangouts Members Present: All Additional Participants:

Minutes:

- We discussed concerns about meeting the deadline
- We discussed the addition of the alternate testing platform
 - O Existing tests remain in place
 - O New tests (for static checks) will go on the new platform

Weekly Collaboration Meeting 2

Date & Location: Sunday 4th of September; Google Hangouts

Members Present: All

Additional Participants:

Minutes:

- Discuss usage of new testing strategy.
- Discuss recent PRs.
- Discuss a few newly discovered issues, and added them to GitHub.

Individual Contributions

David Johnston

- Meetings Attended: All
- Topics Researched: Started looking into Maven Central Upload
- *Code Written:* Added support for testing whether a static syntax check failed. Added tests for all existing static syntax checks. Closed various related GitHub issues.
- Misc:

Trey Erenberger

- Meetings Attended: All
- Topics Researched: None
- Code Written: 1.7 compliance, no main method static check
- Misc:

Dalton Mills

- Meetings Attended: All
- Topics Researched: None
- Code Written: Added raytracer example, fixed issue #46
- Misc:

Individual Hourly Contributions

Trey Erenberger	5 Hours
David Johnston	8 Hours
Dalton Mills	6 Hours

Tentative Plans for Week 7

Continue implementing additional static checks (Issue #52) and tests for them (Issue #54). Start writing up thorough and clearly written end-user documentation (Issue #53).