

## Memorandum

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SUBJECT: Teenage Heartbreak Language Reflection

This semester we wrote our program in Java 8. Our chosen IDE was IntelliJ. Our experience with Java was mostly positive. We found that more of our issues involved finding appropriate libraries that had the functionality that we were looking for.

Java worked well for design documents. Interfaces in Java provided the skeleton and comments on each method helped fill them out. For a few assignments a functional interface was ample information for a design, but often we needed to remind ourselves to add in more data definitions and further documentation about things that wouldn't normally go in an interface to make our design stronger. Typically for each element that we referenced in our interface that wasn't clearly defined, we tried to add it in as a comment, class skeleton, or method signature after the end of the interface block.

In our initial TCP project, we explored several different libraries and ran into issues making the connection and sending data when closing the stream on the client side. We eventually ended up just using Java sockets, which worked well for the Santorini project. Our other libraries were helpful for a number of different tasks. We used a library called Guava to implement method calls with a timeout, Jackson for parsing JSON, Mockito for mocking classes in unit testing, and AssertJ for more clear assertions in unit tests. All of these libraries had good documentation and were great resources for our project.

Our IDE, IntelliJ, was adequate for our development needs. It provided some helpful syntax checking, auto-completion, easy renaming of variables, method refactoring and generation, program running and debugging, and project structure management. We often used the debugger to step through our code and see the values of our variables at each line. This was a big help for us in discovering and fixing many of our bugs. The only real issue we encountered was that after pulling code from github onto our local machines, sometimes the project structure would get messed up and we would need to re-import some of our libraries.