

To: CS4500 Course Staff

From: Julian Hirn and Joshua Rosenberg

Subject: Experience using TypeScript for TAHBPL assignments

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Our experience using TypeScript for the initial assignments have been a mostly positive one. Our first impression with the language was good since we were able to get a working version of code _____. The required time to set up the project was longer than expected since TS/JS projects need a `package.json` file that is tailored to the modules that we decided to use.

Because of the constraints imposed by the client's system, we initially had some reservations about trying to use TypeScript 4.0 since the installed version of node and npm would only permit us to use an older version.

One of the dependencies we needed for parsing json streams did not have any type definitions bundled, and no type definitions were available through definitelyTyped. This meant we had to use the any type for this library, which is less than ideal. If we have spare time in a future assignment, we may attempt to write up the type definitions and make them available through definitelyTyped as an @types package.

Since many libraries that we found have a heavy reliance on callbacks, we found that writing clean and easy to follow code took some extra effort. We think that this is more of a problem at the start since this constraint comes mainly in when working with third party packages which won't as much be the case for the full project, the callbacks will all be encapsulated within a single file/function/class, and we can use the preferred async/await syntax everywhere else.

We also believe that the interoperability between GUI code targeted for the web and for cross desktop running platforms like Electron made GUI development a lot simpler. A clear advantage of this is that it makes it easier to onboard engineers since any kind of related experience makes it simple to understand the frontend.