



\*\* This is documented elsewhere in this report, however, after meeting with the client priorities for certain functionalities of the project have changed. In particular, the client strongly prefers to work offline, so our previous system design that bypassed Zotero and edited the cloud storage via the PyZotero would no longer satisfy the client's needs since it would require an Internet connection. Thus, the developers and business teams met and have agreed to restructure the project in order to accommodate offline use. \*\*\*

### Changes & Notes:

1. We have switched from an application to a Firefox plugin. The reason is simply because Zotero does not recommend directly editing the local SQL Database directly as it can result in corrupted data when syncing with the online database, Zotero instead recommends use of the JavaScript API located in the standalone/Firefox/Chrome directories. Unfortunately the API was designed with the assumption that whoever is using the API is developing a browser based plugin, hence our switch to a FireFox Plugin. Our plugin works with FireFox and the Standalone.
2. Our old python code which uses the PyZotero API still works fantastic for users that will be using Zotero while connected to the internet, therefore we will make it available as a set of tools for other developers or interested users.

### System Design Explanation:

- Our Plugin GUI now uses XUL files instead of Python 2.7.10, just as before the user will interact with this part of our plugin to perform tasks.
- Our Plugin Backend has changed from Python 2.7.10 to JavaScript to better interact with the JavaScript API provided by Zotero. It takes and processes input from the GUI and through firefox interacts with the JavaScript API.
- FireFox, needed to expose Zotero Internals (i.e. the JavaScript API) to our backend for use.
- Our Plugin now uses the JavaScript API instead of the PyZotero API, this has the advantage of making changes locally. The Zotero Online DB will be updated with any changes made offline, or allow the user resolve any conflicts between the offline DB and the Online DB in a similar way to git or other version control systems (this is a built in Zotero function).
- The Local Zotero database (DB) is a SQLite database that Zotero Standalone/Firefox/Chrome uses to store all user data (through the JS API).