Precision Development

Test Plan

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Date : Dec 3, 2015

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1 Testing Strategy

Zotpie is an add-on developed by Precision Development that provides tools to Zotero and extends on previously existing tools to Zotero.

Testing will cover:

- Functionality of batch tag editor and future iterations to ensure main functionality remains bug free.
- Regression on custom field editor and document linker and if these components remain working upon future updates of Zotero.
- Functionality of CSL editor and the correctness of the exported data.

1.1 Test Approach

Type of testing	Reasoning	Tools
Unit Testing	Test individual modules to ensure working state of units of the program.	QUnit
Regression	To ensure future iterations or updates of Zotero does not break functionality.	Selenium, Jenkins-CI
Acceptance Testing	To ensure that the product meets the required specifications outlined by the customer.	Selenium, Manual

1.1.1 Unit Testing

Developers are required define a set of unit tests prior to developing working code to follow Test Driven Development procedures. Unit testing can be done through QUnit, a JavaScript unit testing framework.

1.1.2 Regression Testing

Regression testing will be done in an automated form using Selenium and Jenkins-CI. This allows developers to catch bugs early on. After each major unit of work, a test suite should be run against the up to date codebase to ensure stability. The regression tests should also be run on each new Zotero update to ensure that the latest build of Zotero does not conflict with our current version of Zotpie.

1.2 Limitations

Due to that lack of time, resources and the expertise, covering all planned testing will not be feasible. Given the time planned, we cannot develop test suites to cover all code implement test tools, such as Selenium and Jenkins-CI, and provide proper maintenance for these tools. Also, expertise in JavaScript, web programming and addon development, prior to the project, was very limited. Research on various testing frameworks and how to implement and develop test suites for such frameworks was a new experience for most of the developers. Instead we created acceptance test suites for each individual feature which we ran through to verify that the features work.

1.3 Responsibilities/Schedule

Feature	Testing Done By	Start Date	End Date
Custom Field Editor	Kenny Lam	2015-12-25	2015-01-01
Batch Tag Editor	Brandon Chow	2015-12-25	2015-01-01
Document Linker/Couple Documents	Jason Zheng	2015-12-25	2015-01-01
CSL Editor	Wilfred Wong	2015-12-25	2015-01-01

1.4 Feature Test Suites

Our test suites for each feature is located in the same directory with the following filenames:

Feature	File Name
Custom Field Editor	CustomFieldsTestSuite.pdf
Batch Tag Editor	BatchTagEditorTestSuite.pdf
Document Linker/Couple Documents	DocumentLinkerTestSuite.pdf
CSL Editor	CSLEditorTestSuite.pdf

1.5 Validation Strategy

In the middle of development, we met with the client to confirm if our product meets client’s requirements. As most developers were present during the meeting, we were able to demonstrate a large portion of our product with thorough explanations. We received feedback from our client and input as to whether our product met the client’s expectations. Our client requested the following:

1. **Offline capability is a must, this was from our first meeting with the client.** From this discussion we decided to undergo a heavy overhaul of our system from relying on the PyZotero Python wrapper (which only allowed access to the online database), to using the JavaScript API so that we can access the local database.
2. **The interface of the plugin must be easy-to-use.** We took this suggestion and created intuitive buttons and tabs in Zotero’s pre-existing window to make it easier for users to interact with our plugin. Specifically, adding custom fields should not open up any extra windows.

1.6 Approvals

This plan must be approved by the following people before testing can begin:

Person	Role	Signature
Francisco Estrada (Paco)	Consultant/Adviser	