

# SE 3XA3: Requirements Document

## MacSidenotes

Team 4

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Table 1: **Revision History**

| <b>Date</b>    | <b>Version</b> | <b>Author(s)</b> | <b>Notes</b>           |
|----------------|----------------|------------------|------------------------|
| Oct 6th, 2016  | 0.5            | Josh             | Section 2 Complete     |
| Oct 11th, 2016 | 1.0            | Matt             | Section 1 & 3 Complete |

# **1 Project Drivers**

## **1.1 The Purpose of the Project**

The purpose of this project is to give those who have trouble with online disorganization a vehicle in which they can fully catalogue their internet navigation, leading to a more enhanced, stress-free browsing experience.

## **1.2 The Stakeholders**

### **1.2.1 The Client**

The client for this project is Dr. Spencer Smith of McMaster University.

### **1.2.2 The Customers**

- Anyone who is looking for a more in depth and organized way of tracking where and why they were searching the web.
- Those who take a more thorough approach to their online organization, such as students and working professionals.

### **1.2.3 Other Stakeholders**

- Team members creating the application.
- Teaching Assistant's interested in the project.

## **1.3 Mandated Constraints**

### **1.3.1 Solution Constraints**

Description: The product shall be able to be used by any computer running Windows, Mac OS, Linux or Chrome OS with downloaded Google Chrome

browser. Rationale: The user will not be restricted by operating system. Fit Criterion: The product shall be tested in all operating systems to ensure compatibility.

### **1.3.2 Partner or Collaborative Applications**

The application will be developed based on an existing open source project written in JavaScript.

### **1.3.3 Schedule Constraints**

The project must be finished by mid December 2016.

### **1.3.4 Budget Constraints**

The budget for our project is \$0.

## **1.4 Naming Conventions and Terminology**

1. Google Chrome (Chrome): Google Chrome is a freeware web browser developed by Google.
2. JavaScript: An object-oriented computer programming language commonly used to create interactive effects within web browsers.
3. URL: An acronym for Uniform Resource Locator and is a reference (an address) to a resource on the Internet (ie. a Website).

## **1.5 Relevant Facts and Assumptions**

User must have a working computer with chrome installed. The user must have some familiarity with surfing the web and general internet/computer use. The user must have an understanding of the English language if they wish to comprehend any additional instructions given.

## **2 Functional Requirements**

### **2.1 The Scope of the Work and the Product**

Currently in the Chrome Web Store, there exists a few extensions that function similarly to MacSidenotes. However, each either lacks a feature of this product, or suffers from bugs and is poorly reviewed.

MacSidenotes' combination of simplicity, dependable functionality and ability to link back to web pages from the Note List set it apart from the current offerings.

### 2.1.1 The Context of the Work

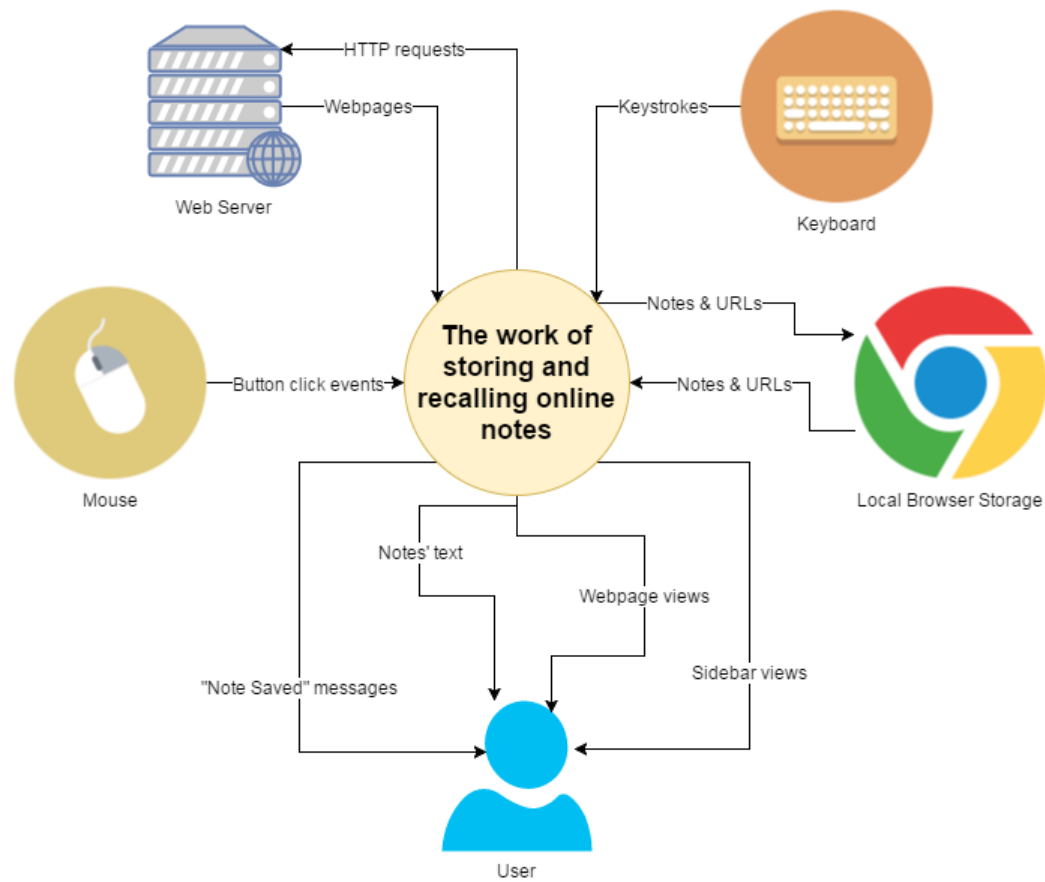


Figure 1: Work Context Diagram

### 2.1.2 Work Partitioning

Table 2: **Business Event List**

| Event # | Event Name                    | Input and Output  | Summary of BUC                                      |
|---------|-------------------------------|---|---|
| 1.      | User clicks extension icon    | Button click event (in)<br>Sidebar view (out)   | Extension sidebar appears when icon is clicked.     |
| 2.      | User types in sidebar         | Keystrokes (in)<br>Text in sidebar (out)  | Note is displayed as it is being entered.           |
| 3.      | User clicks save icon         | Button click event (in)<br>User's note (in)<br>Webpage URL (in)<br>Save message (out)<br>Note & URL (out) | Save user's note in local browser storage.          |
| 4.      | User clicks Note List button  | Button click event (in)<br>Note List view (out)   | Show list of previous notes.                        |
| 5.      | User clicks note in Note List | Button click event (in)<br>HTTP request (out)<br>Webpage response (in)<br>Webpage view (out)              | Send user to URL attached to previously saved note. |

### 2.1.3 Individual Product Use Cases

1. User wishes to create a note for a Wikipedia article (or any webpage) they are viewing, so they click the MacSidenotes icon in their chrome browser. The notes sidebar appears on the right side of the screen
2. User begins to type their note, "Section 7 is relevant for thesis paper" and it appears in the sidebar.
3. User clicks the save icon, and their note is saved in local browser storage along with the URL to that article.
4. User wishes to view all previous notes, so they click the MacSidenotes icon followed by the Notes List icon. A list of notes the user has recorded in the past appear, alongside their respective source URLs.



5. User wishes to recall a specific previous note, so they click on that note in the Notes List. Chrome then takes them to the URL associated with that note, displaying the note in the sidebar as it appeared when they saved it.

## 2.2 Functional Requirements

Requirement #: F.1 Requirement Type: 9 Event/Use case #: 1

**Description:** The product must reveal a typing window "sidebar" on the right hand side of the chrome window when the extension icon is clicked.

**Rationale:** Users need a location to type their notes.

**Originator:** Josh Mitchell

**Fit Criterion:** The window shall appear in the correct location within 1 second of the user clicking on the icon.

**Customer Satisfaction:** 5 **Customer Dissatisfaction:** 5

**Priority:** Very High **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 6th, 2016

Requirement #: F.2 Requirement Type: 9 Event/Use case #: 2

**Description:** The product must allow the user to type their notes into the sidebar.

**Rationale:** Typing is a fast and simple way to record notes.

**Originator:** Josh Mitchell

**Fit Criterion:** The user's exact keyboard input shall appear in the sidebar within 0.1 seconds of the key being pressed.

**Customer Satisfaction:** 5   **Customer Dissatisfaction:** 5

**Priority:** Very High   **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 6th, 2016

Requirement #: F.3   Requirement Type: 9   Event/Use case #: 3

**Description:** Upon the Save Note button being clicked, the product must save the user's note in local browser storage alongside the URL of the web page they were viewing at the time.

**Rationale:** Saving notes for future reference greatly increases the usefulness of the extension.

**Originator:** Josh Mitchell

**Fit Criterion:** After pressing save, Chrome's local storage should append the exact content of the user's note and its associated URL to the list of saved notes. This operation will take under 5 seconds to complete.

**Customer Satisfaction:** 4   **Customer Dissatisfaction:** 4

**Priority:** High   **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 6th, 2016

Requirement #: F.4   Requirement Type: 9   Event/Use case #: 4

**Description:** The product must allow the user to see all previously saved notes by clicking the Notes List button.

**Rationale:** Viewing previous notes greatly increases the extension's usefulness

**Originator:** Josh Mitchell

**Fit Criterion:** The list of notes shall appear in the correct location within 1 second of the user clicking on the icon.

**Customer Satisfaction:** 4    **Customer Dissatisfaction:** 4  
**Priority:** High                      **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 6th, 2016

Requirement #: F.5    Requirement Type: 9    Event/Use case #: 5

**Description:** If the user clicks on a previous note, the product must force Chrome to request the webpage associated with that note's URL.

**Rationale:** The ability to revisit noted webpages greatly increases the extension's usefulness

**Originator:** Josh Mitchell

**Fit Criterion:** The HTTP request must be sent within 1 second of the user clicking the note.

**Customer Satisfaction:** 3    **Customer Dissatisfaction:** 3  
**Priority:** Moderate                      **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 6th, 2016

## 3 Non-functional Requirements

### 3.1 Look and Feel Requirements

Requirement #: NF.1 Requirement Type: 10 Event/Use case #:

**Description:** The product should have an inviting html/css interface.

**Rationale:** The product must be aesthetically pleasing to the user, as well as easy to use.

**Originator:** Matthew Shortt

**Fit Criterion:** When opened sidebar should take up 30 or less percent of the browsing window size.

**Customer Satisfaction:** 5 **Customer Dissatisfaction:** 5

**Priority:** High

**Conflicts:** None

**Supporting Materials:** None

**History:** Created October 5th, 2016

Requirement #: NF.2 Requirement Type: 10 Event/Use case #:

**Description:** The product should not take up vast amounts on the user's web-page.

**Rationale:** The product must take up as little space as possible while still functioning properly in order to not hinder the user's online browsing experience.

**Originator:** Matthew Shortt

**Fit Criterion:** Should match or surpass stakeholder expectation

for appearance.

**Customer Satisfaction:** 4   **Customer Dissatisfaction:** 4  
**Priority:** High   **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

### 3.2 Usability and Humanity Requirements

Requirement #: NF.3   Requirement Type: 10   Event/Use case #:

**Description:** The product shall be easy to use for persons with little experience using the internet and Chrome.

**Rationale:** The ability to be used easily greatly appreciates the app's usefulness.

**Originator:** Matthew Shortt

**Fit Criterion:** Ninety percent of 3XA3 students should be able to use the extension effortlessly with less than 5 minutes of exposure to it.

**Customer Satisfaction:** 5   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

Requirement #: NF.4   Requirement Type: 10   Event/Use case #:

**Description:** The product shall help the user improve online organization.

**Rationale:** The extension is designed to help users with their on-line organizational abilities.

**Originator:** Matthew Shortt

**Fit Criterion:** After two weeks of use, the user shall see their online browsing organization has improved tenfold.

**Customer Satisfaction:** 4    **Customer Dissatisfaction:** 4  
**Priority:** High                      **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

Requirement #: NF.5    Requirement Type: 10    Event/Use case #:

**Description:** The product shall operate using the English language.

**Rationale:** Most users will be able to operate the extension with little knowledge of the English language, and programming languages are in English.

**Originator:** Matthew Shortt

**Fit Criterion:** Instructions and alerts will be outputted in English.

**Customer Satisfaction:** 4    **Customer Dissatisfaction:** 4  
**Priority:** High                      **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

### 3.3 Performance Requirements

Requirement #: NF.6 Requirement Type: 10 Event/Use case #: 1-5

**Description:** Any response of the system to user input shall be fast enough to not interrupt the users flow.

**Rationale:** The extension must be fast in order to keep up with the user.

**Originator:** Matthew Shortt

**Fit Criterion:** The extension shall respond in less than 0.1 seconds in most cases. No response shall take longer than 2 seconds.

**Customer Satisfaction:** 5 **Customer Dissatisfaction:** 5  
**Priority:** High **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

Requirement #: NF.7 Requirement Type: 10 Event/Use case #:

**Description:** The product shall be available for use 24 hours a day 365 days a year.

**Rationale:** The extension must always be available for use because the user has vital information stored in it.

**Originator:** Matthew Shortt

**Fit Criterion:** The user shall always be able to use the application.

**Customer Satisfaction:** 5   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None

**Supporting Materials:** None  
**History:** Created October 7th, 2016

### 3.4 Operational and Environmental Requirements

Requirement #: NF.8   Requirement Type: 10   Event/Use case #:

**Description:** The product shall be used by any person with a working computer with Chrome installed.

**Rationale:** The user must have these specifications in order to use the extension.

**Originator:** Matthew Shortt

**Fit Criterion:** The extension will work on any Computer with Chrome installed on it.

**Customer Satisfaction:** 5   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None

**Supporting Materials:** None  
**History:** Created October 7th, 2016

Requirement #: NF.9   Requirement Type: 10   Event/Use case #:

**Description:** The product should be able to be put on the Google PlayStore.

**Rationale:** Any person with Chrome would be able to install the



extension.

**Originator:** Matthew Shortt

**Fit Criterion:** The extension will be downloadable from the store and work on the computer.

**Customer Satisfaction:** 2    **Customer Dissatisfaction:** 2  
**Priority:** Low                      **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

### 3.5 Maintainability and Support Requirements

Requirement #: NF.10    Requirement Type: 10    Event/Use case #:

**Description:** The product might eventually be able to save notes with Google Drive.

**Rationale:** The user could then have access to their notes and history on any computer that they sign into Chrome with.

**Originator:** Matthew Shortt

**Fit Criterion:** Specification of future environments that the application will have to deal with.

**Customer Satisfaction:** 3    **Customer Dissatisfaction:** 3  
**Priority:** Low                      **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

### 3.6 Security Requirements

Requirement #: NF.11 Requirement Type: 10 Event/Use case #:

**Description:** Only holders of the users login information to Chrome will have access to the browsing history and notes of the user.

**Rationale:** The users personal browsing is not shared with anyone who does not have access to it already.

**Originator:** Matthew Shortt

**Fit Criterion:** Users without permissions to Chrome accounts will not be granted access to the users extension.

**Customer Satisfaction:** 5 **Customer Dissatisfaction:** 5

**Priority:** High

**Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

### 3.7 Cultural Requirements

Requirement #: NF.12 Requirement Type: 10 Event/Use case #:

**Description:** The product shall not be offensive to religious or ethnic groups.

**Rationale:** This would be insensitive to users.

**Originator:** Matthew Shortt

**Fit Criterion:** Will not contain any derogatory or offensive language or icons.

**Customer Satisfaction:** 4   **Customer Dissatisfaction:** 4  
**Priority:** High   **Conflicts:** None

**Supporting Materials:** None  
**History:** Created October 7th, 2016

### 3.8 Legal Requirements

Requirement #: NF.13   Requirement Type: 10   Event/Use case #:

**Description:** The product shall comply with the 'Developer Program Policies' laid out by Google.

**Rationale:** Ensure no legal infringements are occurring.

**Originator:** Matthew Shortt

**Fit Criterion:** All policies must be met.

**Customer Satisfaction:** 5   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None

**Supporting Materials:** None  
**History:** Created October 7th, 2016

### 3.9 Health and Safety Requirements

Requirement #: NF.14   Requirement Type: 10   Event/Use case #:

**Description:** The product shall not affect the users health in any manner.

**Rationale:** Causing health or safety issues does not align in any

way with the view of this project and should be taken seriously.

**Originator:** Matthew Shortt

**Fit Criterion:** No harm will come to the user.

**Customer Satisfaction:** 5    **Customer Dissatisfaction:** 5  
**Priority:** High                      **Conflicts:** None

**Supporting Materials:** None

**History:** Created October 7th, 2016

## 4 Project Issues

### 4.1 Open Issues

It is not yet known if our inexperience with JavaScript will be a significant hurdle in the development of this project.

### 4.2 Off-the-Shelf Solutions

#### 4.2.1 Ready-Made Products

[Sticky Notes - Just popped up!](#)  
[Memo Notepad](#)  
[Google Keep - notes and lists](#)

#### 4.2.2 Reusable Components

[jQuery](#)  
[jQuery UI](#)

#### 4.2.3 Products That Can Be Copied

[sidenotes](#)

Note: this is the existing extension that this project is based on. It is currently in a non-functioning state, although some insight into extension design can be gleaned from it.

## **4.3 New Problems**

### **4.3.1 Effects on the Current Environment**

Due to the siloed implementation of Chrome extensions, MacSidenotes should have no adverse effects on the functionality of other extensions.

### **4.3.2 Effects on the Installed Systems**

MacSidenotes will appear in the extension bar alongside any other extensions the user has installed. Other than making the address bar shorter (by the length of the MacSidenotes icon), it should co-exist peacefully with the rest of the user's Chrome ecosystem.

### **4.3.3 Potential User Problems**

MacSidenotes should not adversely affect the user's interaction with other Chrome extensions.

### **4.3.4 Limitations in the Anticipated Implementation Environment That May Inhibit the New Product**

If the user's machine barely meets Chrome's minimum system specifications, adding MacSidenotes (or any other extension for that matter) may cause slowdown or crashes. This is unlikely, however, given the lightweight nature of MacSidenotes and the system specifications of most semi-modern computers.

## **4.4 Tasks**

[MacSidenotes Gantt Chart .gan format](#)

[MacSidenotes Gantt Chart .pdf format](#)

## **4.5 Migration to the New Product**

Due to the siloed nature of Chrome extensions, modifications to the existing system are not necessary for the implementation of MacSidenotes.

## 4.6 Risks

Table 3: **Risks**

| Priority | Risk   | Probability,<br>Severity | Mitigation Plan  |
|----------|--|--------------------------|--|
| 1        | Developers' inexperience with JavaScript prevents correct/timely implementation of project | 5%,<br>Extreme           | Familiarizing with some of the many relevant JavaScript tutorials found online                         |
| 2        | Developers' inability to meet deadlines prevents timely completion of project              | 5%,<br>Extreme           | Adhering to a weekly meeting schedule and discussing possible setbacks before they become overwhelming |
| 3        | Incorrect implementation of Req F.3 causes loss of user data                               | 10%, High                | Thorough and complete testing of the note saving system  |

## 4.7 Costs

Costs will be measured in time required to complete each Functional Requirement.

Table 4: **Costs**

| Requirement | Time   |
|-------------|--------|
| F.1         | 3 Days |
| F.2         | 1 Day  |
| F.3         | 3 Days |
| F.4         | 2 Days |
| F.5         | 2 Days |

## 4.8 User Documentation and Training

### 4.8.1 User Documentation Requirements

Table 5: User Documentation Requirements

| Documentation             | Purpose  |
|---------------------------|--|
| Chrome Web Store Overview | To describe the extension's features to potential users  |
| How To Use Button         | To introduce new users to the functionality of MacSidenotes. It lists the steps required to create, save and recall notes. |

### 4.8.2 Training Requirements

MacSidenotes requires no training to be used.

## 4.9 Waiting Room

In future, notes may be able to be stored in a cloud service like Google Drive or Dropbox to be accessed from anywhere. They may also be linked to the user's Chrome account to sync across multiple devices.

These requirements are not necessary for a minimum viable product, so they will be revisited once a minimum viable product is achieved.

## 4.10 Ideas for Solutions

None at this time.

## References

## 5 Appendix

This section has been added to the Volere template. This is where you can place additional information.

### 5.1 Symbolic Parameters

The definition of the requirements will likely call for SYMBOLIC\_CONSTANTS. Their values are defined in this section for easy maintenance.