

Software Requirements Document

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Document Objective

This document showcases the requirements engineering process used by software engineers and how requirements were elicited. The methodology section discusses the approach used by engineers to derive requirements and identify stakeholders. The user stories section outlines the initial user stories that the team conceptualized during the initial stages of the elicitation process.

Requirements Elicitation Methodology

Team members utilized various methods in order to obtain stakeholder requirements for the Interactive Timeline. Initial requirements elicitation involved informal processes where team members brainstormed individually and then as a group after each members brainstorms 5-10 user stories on their own. The team then used observation by visiting the Niagara on The Lake Museum to gather data on exhibits offered and gather user and client requirements. In addition, informal prototyping was developed in the presentation titled '[Museum Visit and Design Proposal.pdf](#)' under the Documentation Folder. The presentation served as a visual guide which featured existing models to facilitate discussion and improve brainstorming ideas.

User Stories

User stories were created individually by each member of the team after initial informal stages of the elicitation process. Although some features are marked as being used in the backlog, there may be additional changes given that the Scrum methodology is being used to develop this project. Similarly, some user stories that are marked as not being used in the backlog, may be revised, and implemented as a feature at a later date.

Stakeholder	User Story	Used in Backlog
All	As any role, I want to be able to register and login	Yes
User	As a User, I want to be able to scroll zoom the timeline so that its easy access.	Yes
User	As a User, I want to be able to easily distinguish between important events and artifacts available.	Yes
User	As a User, I want to be able to easily distinguish between important events and artifacts available.	Yes
User	As a User, I want to be able to easily distinguish between important events and artifacts available.	Yes
User	As a user, I want to be able to have other reliable resources linked so that I can have relevant information.	Yes

Editor	As an editor, I want to be able to easily make edits without having access to sensitive information so that all information is easily editable without causing security issues.	Yes
Editor	As an editor, I want to be able to easily make edits without having access to sensitive information so that all information is easily editable without causing security issues.	Yes
Editor	As an editor, I want to be able to have access to content material but not user info	Yes
Editor	As an admin, I want to be able to have all access as editor, additionally be able to tweak user information	Yes
Admin	As an admin, I want to be able to have all access as editor, additionally be able to tweak user information	Yes
Admin	As an admin, I want to be able to have all access as editor, additionally be able to tweak user information	Yes
User	As a User, I want to be able to filter information tagwise on the timeline	Yes
User	As a User, I must be able to easily toggle between the amount of time displayed on the screen at once (link)	Yes
User	As a User, I want to be able to have easy access to everything only via keyboard (accessibility)	Yes
User	As a User, I want to be able to have control over any new exhibits (collaboration)	Yes
User	As a User, want to be able to I have some control over content displayed (optional)	Yes
Editor	As an editor, I should be able to add notifications on the notification bar / email	Yes
User	As a first-time user, I want to be able to receive some help in terms of how to navigate the timeline.	Yes
User	As a registered user, I want to be able to create notes and be able to view only selected years and information – for educational purpose	Yes
User	As a User, I want to be able to receive directions and relevant information in order if I select being in the museum (optional)	No
Admin	As an administrator, I would like to be able to make edits easily to update timeline literature.	Yes
Admin	As an administrator, I need to have security protocols for the interactive timeline such that user login and museum information is secure.	Yes
User	As a user, I would like to have a chatbot to assist me so that I can receive help if I am lost.	Yes
User	As a user, I would like to have an option to book viewing times for an in-person experience so that if I am interested in an aspect of the timeline, I can easily be directed to view the corresponding exhibit in person.	Yes
User	As a user, I would like to have audio and visuals to create an immersive experience that compliments intractability so that the user can be engaged as much as possible without being physically present.	Yes

User	As a user, I would like to have accessibility features available such as text to speech or audio description so that users that are visually impaired or disabled can still interact with the virtual museum features.	Yes
User	As a user, I would like to see modern design practices so that the web application is up to date and aligns with other modern web design practices.	Yes
User	As a user, I would like page reloads to take no longer than <i>one</i> second so that every page/ component of the website is consistent and does not lag.	Yes
Admin	As a museum staff member, I would like the site to be accessible 24/7 so that users can access the exhibits/ timeline at according to their needs.	Yes
Admin	As a museum staff member, I would like for updates and maintenance to take place during low traffic times such as 3am so that users are not disrupted during peak times.	Yes
Partner Organization	As a partner organization, I would like for the timeline to be easily integrated for other online exhibits and presentations (portability and reuse)	Yes
Member	As a member, I want to be able to book a tour so that I may enjoy the museum experience in person.	Yes
Member	As a member, I want to be able to cancel a tour if the need arises so that I do not waste my money on an event I will not be attending.	Yes
Member	As a member, I want to be able to change the way I view the timeline so that I can facilitate navigation of the timeline.	Yes
Member	As a member, I want to be able to showcase museums and exhibits that I've previously attended.	Yes
Member	As a member, I want to be able to manage my user profile.	Yes
Member	As a member, I want to be able to see past/current tours that I have signed up for.	Yes
Member	As a member, I want to be able to view different timeline displays (ex. option of horizontal or vertical)	Yes
User	As a user, I want to be able to have access to a menu of the most used features so that I can quickly navigate the website.	Yes
User	As a user, I want to be able to view frequently asked questions so that I can have a better understanding of how to navigate the museum website and museum activities.	Yes
User	As a user, I want to be able to view information about a historical event so that I may learn about the event.	Yes
User	As a user, I want to be able to contact the tour guide so that I can facilitate my understanding of an event.	Yes

User	As a user, I want to be able to contact a tour guide so that I can inquire about the different tours available.	Yes
User	As a user, I want to be able to search for data so that I can facilitate my research	Yes
User	As a user, I want the ability to search for info using filters so that I can pinpoint exactly what I'm looking for.	Yes
User	As a user, I want to be able to make donations so that I can support the museum's activities	Yes
User	As a user, I want to be able to apply for a membership so that I can take advantage of the member benefits.	Yes
User	As a user, I would like to see a tutorial as a first-time user so that I have a basic understanding of the website layout.	Yes
User	As a user, I would like to see a preview when I hover over something with my mouse, so that I can know the description/functionality.	Yes
User	As a general user, I want to have access to accessibility options so that I can navigate the website more effectively.	Yes
User	As a user, I want to be able to navigate the timeline non-sequentially so that I can get to a specific event with ease.	Yes
User	As a user, I want to be able to contact a tour guide so that I can ask questions regarding the tour.	Yes
Admin	As an administrator, I want to be able to manage the website so that it can continue to deliver useful service in an efficient manner.	Yes
Admin	As an administrator, I want to be able to manage users so that I can provide the best experience for all users.	Yes
Admin	As an administrator, I want to be able to manage the tour guides so that I can facilitate their use of the website.	Yes
Admin	As an administrator, I want to be able to manage the content published to the website to ensure that the data is accurate.	Yes
Admin	As an administrator, I want to be able to refund tours so that attendees have the option to cancel a tour within a specified time. (Removed from Backlog)	Yes
Manager	As a general manager, I want to be able to add a tour so that participants may attend.	Yes
Manager	As a general manager, I want to be able to remove a tour when it is no longer needed so that participants do not think it is available to attend.	Yes
Manager	As a general manager, I want to be able to change tour time slots if the tour guide requests a change in time so that changes are made accordingly.	Yes

Manager	As a general manager, I want to be able to edit content relative to the tour to facilitate participant's understanding about the tour.	Yes
Manager	As a general manager, I want to be able to remove a participant if they are unable to join so that another can take their place.	Yes
Manager	As a general manager, I would like to send out a mass email to notify participants of any sudden changes.	No
Manager	As a general manager, I would like to remove someone's membership so that I can ensure a non-toxic environment. (Optional)	No
Manager	As a general manager, I would like to deal with any refunds requested by users so that we can ensure an adequate number of participants attend the tour.	No
Tour Guide	As a tour guide, I want to be able to have a way to contact the general manager so that I can request a change.	Yes
Tour Guide	As a tour guide, I would like to be able to view a list of participants so that I can know who is attending.	Yes
Tour Guide	As a tour guide, I'd like to be able to have a way of contacting members so that I can reply to any questions (optional)	No

Product Backlog

This section maps the user stories to the features in the backlog which are ordered by priority. Additionally, the backlog is ordered by backlog idea and each item has corresponding story points.

Priority	Product Backlog Items	ID #	User Story	Story Points
1	Database Creation	5	As an administrator, I would like to freely create databases so that we can effectively store data.	60
2	Reload and maintenance optimizations	39	As a user, I would like the website to use less memory so that the page can load efficiently.	50
3	Introductory Timeline horizontal	67	As a user, I want to see a timeline.	50

4	User profile Page	22	As a member, I want to be able to manage my user profile to enhance my user experience. (*Epic*)	40
Y, 5	Scroll Functionality	51	As a user, I want to be able to scroll and zoom the timeline so that it's easy to access.	50
6	Web rendering optimization	40	As a User, I want the page to load without regard to the GPU.	60
7	Database population – research and content	77	As an administrator, I would like to add users, historical artifacts and information to the database so that this data is centralized.	60
8	Header Creation - Navigation menu	74	As a user, I would like to have access to a navigation menu so that I can easily navigate through the website.	60
9	Footer Creations - contact info	69	As a User, I want to be able to have easy access to contact information and features on every page.	60
10	Login Page	50	As any role, I want to be able to register and login.	50
11	Timelines Page	67	As a user, I want to see a timeline.	50
12	Filtered Search - using dates, tags, etc.	57	As a user, I want to search for info using filters that I can pinpoint exactly what I am looking for.	38
13	CSS for all pages - setting standards for modern web design practices	10	As a User, I want a uniform website with intuitive placement to links.	60
14	Registration Page	50	As any role, I want to be able to register and login.	50
15	General Search – HTML5 existing functionality	10	As a user, I want the ability to search for info to facilitate research.	40
16	Switch to variation of timeline via events and artifacts instead of strictly the time itself	52	As a User, I want to be able to distinguish between important events and artifacts available easily.	38
17	Individual pages for all events and linked resource	11	As a User, I want to be able to click on artifacts or events to find out more about it.	38

18	Sub – timeline (TAG)	24	As a User, I want to be able to filter out information.	38
19	Admin – manage website	24	As an administrator, I want to be able to manage the website so that it can continue to deliver useful service in an efficient manner. (*Epic*)	30
20	Admin – edit permission	25	As an administrator, I want to be able to manage users so that I can provide the best experience for all users.	30
21	Admin – manage all users			30
22	User – manage profile	22	As a user, I want to be able to manage my profile to let me customize my account.	30
23	Editor and above – manage content	27	As an editor or above, I want to be able to manage the content published to the website to ensure that the data is accurate.	30
24	User- Apply for membership	50	As a user, I want to be able to register and login.	30
25	Member – timeline display options	20	As a member, I want to be able to change the way I view the timeline so that I can facilitate navigation of the timeline.	30
26	Timeline hover for info functionality	14	As a user, I would like to see a preview when I hover over an item with my mouse so that I can know the description/functionality.	30
27	Filter content directly on timeline	10	As a user, I want to be able to filter information by tags on the timeline.	30
28	Page for administrative overview of users or participants	56	As an administrator, I want to be able to have all access as an editor and additionally be able to tweak user information.	30
29	Tutorial	13	As a user, I would like to see a tutorial as a first time user so that I have a basic understanding of the website layout and timeline navigation.	20
30	Audio and visuals	43	As a user, I would like to have audio and visuals to create an immersive experience that compliments intractability so that the user can be engaged as much as possible without being physically present.	20
31	Toggle function for vertical or horizontal timeline	72	As a User, I must be able to easily toggle between the amount of time displayed on the screen at once (link).	20

32	Detailing the Timeline, distinguished artifacts and events.	12	As a User, I want to be able to click on artifacts or events to find out more about it.	20
33	Mass mail and notifications by editors and above.	30	As an editor or above, I want to be able to send out a mass email or website notifications to notify users of any sudden changes.	20
34	User History	29	As a user, I want to be able to view my user history so that I can keep track of my account activities.	13
35	Calendar function (editors and above)– add, edit and remove tours – auto notifications	76	As an editor or above, I would like to receive calendar notifications so that I can be informed of any tour changes.	10
36	Calendar function (users – for now) – book and cancel tours	78	As a user, I want to be able to use a calendar to manage my tours so that I have more control over my attendance.	10
37	Calendar function (users – for now) – book and cancel viewing times	42	As a user, I would like to have an option to book viewing times for an in-person experience so that if I am interested in an aspect of the timeline, I can easily be directed to view the corresponding exhibit in person.	10
38	Toggle the amount of time displayed – preferably through scroll or select. http://histropedia.com/timeline/	58	As a User, I must be able to easily toggle between the amount of time displayed on the screen at once.	10
39	Keyboard access to everything	37	As a User, I want to be able to access all of the website via keyboard.	8
40	Accessibility options - Text to speech, speech to text (ex. From videos, closed caption)	15	As a user, I want to have access to accessibility options so that I can navigate the website more effectively.	8
41	Communications – between different users	34	As any user (admin, editor, user etc.) I want to be able to communicate on the website with different users.	8

42	Compartmentalize code for easy reuse and portability	45	As a developer, I want the timeline to be available to a wide range of devices so that more users can view the timeline.	5
43	FAQ Page	5	As a user, I want to be able to view frequently asked questions so that I can have a better understanding of how to navigate the museum website and museum activities.	5
44	Redirect for donation option	43	As a User, I want to be able to make donations.	5
45	Options to select in person view for directions	46	As a User, I would like to have directions and ap information if I select an option of viewing the museum in person	3

Sprint Backlog

The following backlog tool contains the product backlog and sprint backlog items. The sprint backlog only contains items for the initial sprints as the scrum methodology is being implemented. Future sprint backlog items will be added to corresponding sprints during sprint planning and review meetings.

▼ Sprint 4: Report Consolidation 22 Feb 2023-28 Feb 2023		0 closed 60 total
#10	CSS for all pages – setting standards for modern web design practices	60
SPRINT TASKBOARD		
▼ Sprint 3 15 Feb 2023-21 Feb 2023		0 closed 258 total
#3	Header Creation – Navigation menu	60
#4	Footer Creations – Logo and contact information	60
#7	Login Page	50
#9	Timelines Page	50
#15	Filtered Search – using dates, tags, etc.	38
SPRINT TASKBOARD		
▼ Sprint 2 08 Feb 2023-14 Feb 2023		0 closed 220 total
#1	Database Creation	60
#5	Introductory timeline – horizontal	50
#16	Scroll functionality	50
#40	Web rendering optimization	60

Backlog Tool



Projects

Interactive Timeline
Project - Devs

Scrum



Epics



Scrum



Issues

0% 1,385 defined points 0 closed points 0 points / sprint



CUSTOMIZE YOUR BACKLOG GRAPH

To have a nice graph that helps you follow the evolution of the project you have to set up the points and sprints through the [Admin](#)

Backlog 37 user stories

+ USER STORY

Filters

subject or reference

Tags

USER STORY

STATUS

POINTS

#2 Database population – research and content ongoing

New

60

#39 Reload and maintenance optimizations ongoing

New

50

#8 User profile Page

New

40

#6 Registration Page

New

40

#14 General Search – HTMLS existing functionality

New

40

#25 Switch to variation of timeline via events and artifacts instead of strictly the time itself

New

38

#11 Individual pages for all events and linked resource

New

38

#24 Sub – timeline (TAG)

New

38

#17 Admin – edit permission

New

30

#19 Admin – manage website

New

30

#18 Admin – manage all users

New

30



Search



Wiki



Team



Settings

collapse menu



10 SPRINTS

Add +

Sprint 10: Testing

05 Apr 2023-18 Apr 2023

0 closed

0 total

Drop here Stories from your backlog to start a new sprint

SPRINT TASKBOARD

Sprint 9

29 Mar 2023-04 Apr 2023

0 closed

0 total

Drop here Stories from your backlog to start a new sprint

SPRINT TASKBOARD

Sprint 8: Report & Presentation

22 Mar 2023-28 Mar 2023

0 closed

0 total

Drop here Stories from your backlog to start a new sprint

SPRINT TASKBOARD

Sprint 7

15 Mar 2023-21 Mar 2023

0 closed

0 total

Drop here Stories from your backlog to start a new sprint

SPRINT TASKBOARD

Sprint 6

08 Mar 2023-14 Mar 2023

0 closed

0 total

Drop here Stories from your backlog to start a new sprint

SPRINT TASKBOARD

Sprint 5

01 Mar 2023-07 Mar 2023

0 closed

0 total

Drop here Stories from your



BADGER TECH



#21

User – manage profile

New

30