

# Museum Assistance Program

## Final Progress Report

### GROUP MEMBERS:

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## Roles:

- Steven Sabharwal: Scrum Master, Developer
- George Barakat: Product Owner, Developer
- Yannick De Caluwe: Developer
- Evan Galea: Developer
- Reet Chahil: Developer, GitHub Manager
- Henry Tu: Developer
- Fahad Umair: Developer
- Arshdeep Singh: Developer

## Proposal and Backlog Creation (January 12<sup>th</sup> to 31<sup>st</sup>):

- Had three meetings to create the backlog and set a plan for how the scrum process will go
- Everyone helped create stories so that we all understand what we were going to make
- George organized the backlog in Jira with help from Yannick and some others

## Sprint 1 (January 31<sup>st</sup> to February 14<sup>th</sup>):

Sprint Planning Meeting – Sprint 1 (February 2<sup>nd</sup>, 2023):

### Agenda:

- Sprint #1 Responsibilities: Assign and divide responsibilities for the tasks in Sprint #1 among the entire group.
- Peer Programming: Discuss the possibility of using pair programming for high-workload tasks to improve efficiency and collaboration.
- Channel Creation: Discuss and decide on creating separate channels for the database, frontend, and backend teams for better organization and communication.
- Scrum Meeting Configuration: Review and discuss the need to re-configure the frequency or timing of scrum meetings.
- Technology Decision: Discuss and decide whether to use Node JS or just React for the project, considering technical requirements and team expertise.

### Overall Goals:

- Design the webpage.
- Design the Database
- Implement the Database Queries
- Setups react for the webpage.
- Create the webpage with react.
- Admin login

### Sprint 1 Plan:

▼ IT4P02 Sprint 1 31 Jan – 14 Feb (12 issues)
<input checked="" type="checkbox"/> IT4P02-1 The timeline should be able to retrieve data about artifacts to fill the timeline from a data base.
<input checked="" type="checkbox"/> IT4P02-2 Design the database for a timeline about artifacts and exhibits
<input checked="" type="checkbox"/> IT4P02-3 Implement the database based on the design
<input checked="" type="checkbox"/> IT4P02-4 Test that the created database works as expected
<input checked="" type="checkbox"/> IT4P02-7 Identify other frameworks and APIs needed
<input checked="" type="checkbox"/> IT4P02-8 Finalize design plans for artifact timeline page <span style="background-color: #e0e0ff; border: 1px solid #8080ff; padding: 2px;">(TIME LINE FORMAT) AS A USER, I ...</span>
<input checked="" type="checkbox"/> IT4P02-5 Integrate the database into the timeline.
<input checked="" type="checkbox"/> IT4P02-6 Host the website so it is accessible on the web
<input checked="" type="checkbox"/> IT4P02-9 Landing Page and Exhibition Select <span style="background-color: #e0e0ff; border: 1px solid #8080ff; padding: 2px;">(TIME LINE FORMAT) AS A USER, I ...</span>
<input checked="" type="checkbox"/> IT4P02-20 As an Administrator, I want to be able to click a login button to sign in. <span style="background-color: #ffccbc; border: 1px solid #d32f2f; padding: 2px;">(LOGIN) AS AN ADMINISTRATOR, I ...</span>
<input checked="" type="checkbox"/> IT4P02-10 As a User, I want to see artifacts to be in chronological order <span style="background-color: #e0e0ff; border: 1px solid #8080ff; padding: 2px;">(TIME LINE FORMAT) AS A USER, I ...</span>
<input checked="" type="checkbox"/> IT4P02-11 As a User, I want to be able to see a basic information of an artifact when scrolling through the timeline <span style="background-color: #e0e0ff; border: 1px solid #8080ff; padding: 2px;">(TIME LINE FORMAT) AS A USER, I ...</span>

### Scrum Meeting – Sprint 1 (February 9<sup>th</sup>, 2023):

- Discussed the accomplished work done by each member during the first week.
- Discussed obstacles that occurred during the early stages of the process.
- Planned the next week tasks.
- Reet and George showed the parts of the Figma design to get any pointers
  - Ended up discussing that there should be a phone friendly version
  
- Steven
  - Gathering data and information needed for the application.
  - Figuring out React and learning about it.
  
- Reet
  - Learning more about git functions.
  - Created the Figma account.
  - Started the early stages of the actual interface design.
  
- George
  - Working alongside Reet on designing the interface.
  
- Yannick
  - Figuring out Firebase and learning about it.
  - Working on database
  
- Fahad
  - Helping Yannick with setting up firebase.
  - Learning about firebase.
  
- Arshdeep
  - Helping Reet and George with designing the interface.
  
- Evan
  - Setting up bases for React.
  - Figure out React router.

### Sprint 1 completed tasks (Retrospective meeting was cancelled)

#### Achieved:

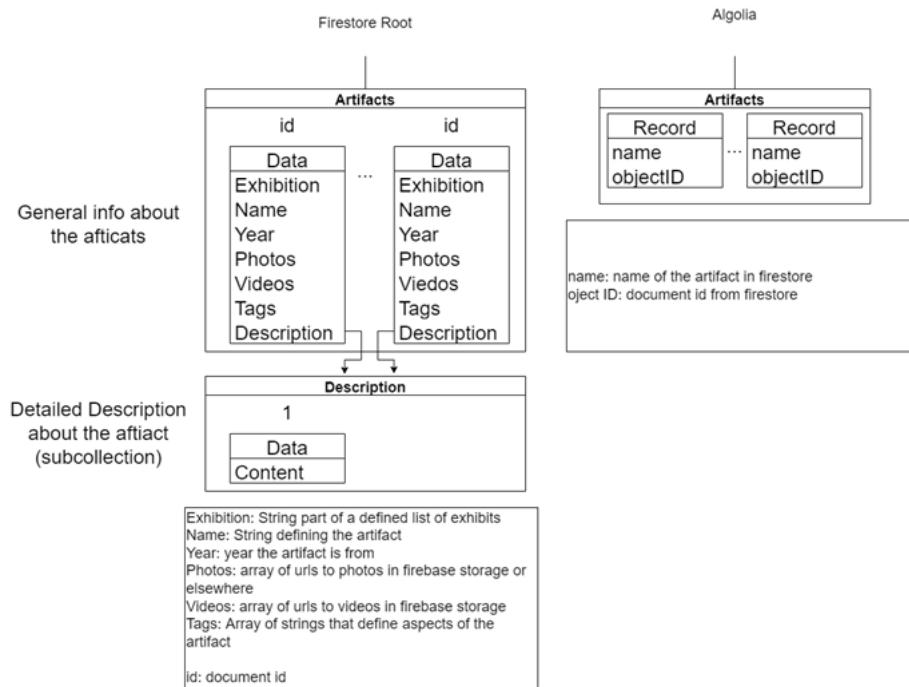
- Design the webpage.
- Design the Database.
- Implement the Database Queries.
- Setup React for the webpage.

## Sprint 1 plan at the end:

IT4P02 Sprint 1 31 Jan – 14 Feb (12 issues)	
<input checked="" type="checkbox"/> IT4P02-1	The timeline should be able to retrieve data about artifacts to fill the timeline from a data base.
<input checked="" type="checkbox"/> IT4P02-2	Design the database for a timeline about artifacts and exhibits
<input checked="" type="checkbox"/> IT4P02-3	Implement the database based on the design
<input checked="" type="checkbox"/> IT4P02-4	Test that the created database works as expected
<input checked="" type="checkbox"/> IT4P02-7	Identify other frameworks and APIs needed
<input checked="" type="checkbox"/> IT4P02-8	Finalize design plans for artifact timeline page <span style="background-color: #e0e0ff; border: 1px solid #8080ff; padding: 2px;">(TIME LINE FORMAT) AS A USER, I ...</span>
<input checked="" type="checkbox"/> IT4P02-5	Integrate the database into the timeline.
<input checked="" type="checkbox"/> IT4P02-6	Host the website so it is accessible on the web
<input checked="" type="checkbox"/> IT4P02-9	Landing Page and Exhibition Select <span style="background-color: #e0e0ff; border: 1px solid #8080ff; padding: 2px;">(TIME LINE FORMAT) AS A USER, I ...</span>
<input checked="" type="checkbox"/> IT4P02-20	As an Administrator, I want to be able to click a login button to sign in. <span style="background-color: #ffcccc; border: 1px solid #cc0000; padding: 2px;">(LOGIN) AS AN ADMINISTRATOR, I ...</span>
<input checked="" type="checkbox"/> IT4P02-10	As a User, I want to artifacts to be in chronological order <span style="background-color: #e0e0ff; border: 1px solid #8080ff; padding: 2px;">(TIME LINE FORMAT) AS A USER, I ...</span>
<input checked="" type="checkbox"/> IT4P02-11	As a User, I want to be able to see a basic information of an artifact when scrolling through the timeline <span style="background-color: #e0e0ff; border: 1px solid #8080ff; padding: 2px;">(TIME LINE FORMAT) AS A USER, I ...</span>

## Database Work By: Yannick De Caluwe

Adding data into the data base is simple with the method created we can simply give a JSON file with records that will be added to the data.



### A base in the format defined above.

The screenshot shows the Google Cloud Firestore web interface. On the left, there's a sidebar with a collection named "Artifacts" containing documents like "admin" and "artifacts". The main area shows a document named "08C1DHn7Wp6kD0v87HFo". The document details are as follows:

- Description:** 0sRSLqi8xKsm0qV5VAzT
- Related:** 13GWFFBjZNaNbtq7zJGA
- Tags:**
  - 0 "Letter"
  - 1 "Furniture"
- Videos:** A link to a video file: "https://firebasestorage.googleapis.com/v0/b/cosc4p02-project-a5335.appspot.com/o/niagara\_on\_the\_lake.mp4?alt=media&token=6c5aae5e-2767-488e-bbc-b22649cc48d3"
- Year:** 1918

Adding data into the data base is simple with the method created we can simply give a JSON file with records that will be added to the data base in the format defined above.

Above and below are a couple screenshots of the web fire store console of one document after 50 documents had been added (the data is mock data created using <https://www.mockaroo.com>)

This screenshot shows the same Google Cloud Firestore interface after 50 documents have been added. The document "08C1DHn7Wp6kD0v87HFo" now includes additional fields and values:

- Description:** 0sRSLqi8xKsm0qV5VAzT
- Exhibition:** "Indigenous History"
- Name:** "Bitwolf"
- Photos:**
  - 0 "http://dummyimage.com/236x216.png/ddddd/000000"
  - 1 "http://dummyimage.com/168x204.png/5fa2dd/fffff"
- Related:** 13GWFFBjZNaNbtq7zJGA
- Tags:**
  - 0 "Letter"
  - 1 "Furniture"

Artifacts > 08C1DHn7Wp6kD0v87HFo > Description > sGPQ3YqlBjRFVqLYWsxf.

More in Google Cloud

08C1DHn7Wp6kD0v87HFo	Description	sGPQ3YqlBjRFVqLYWsxf
+ Start collection	+ Add document	+ Start collection
Description	sGPQ3YqlBjRFVqLYWsxf	+ Add field
		content: "Aliquam sit amet diam in magna bibendum imperdiet. Nullam orci pede, venenatis non, sodales sed, tincidunt eu, felis."
+ Add field		
		
Related		

### Testing some queries (below) to make sure it works as expected:

```

console.log("Full filter Test 1:")
await queryTagsExhibitsYearRange(["Indigenous History"], ["Furniture"], 1750, 1850)
console.log("Full filter Test 2:")
await queryTagsExhibitsYearRange(["War of 1812"], ["Furniture"], 1750, 1850)
console.log("Full filter Test 3:")
await queryTagsExhibitsYearRange(["Indigenous History"], ["Book"], 1750, 1850)
console.log("Full filter Test 4:")
await queryTagsExhibitsYearRange(["Reminiscence"], ["Furniture"], 1700, 1850)

```

```

Tags Test 2:
▶ {Videos: Array(1), Exhibition: 'Indigenous History', Photos: Array(2), Name: 'Ronstring', Year: 1751, ...}
▶ {Videos: Array(1), Year: 1758, Tags: Array(2), Exhibition: 'War of 1812', Name: 'Fintone', ...}
▶ {Tags: Array(2), Year: 1777, Name: 'Kanlam', Photos: Array(2), Exhibition: 'War of 1812', ...}
▶ {Name: 'Flexidy', Year: 1786, Exhibition: 'Indigenous History', Photos: Array(2), Tags: Array(2), ...}
▶ {Photos: Array(2), Exhibition: 'Indigenous History', Tags: Array(2), Year: 1828, Name: 'Sonsing', ...}
▶ {Year: 1844, Tags: Array(2), Photos: Array(2), Exhibition: 'Indigenous History', Name: 'Stringtough', ...}
▶ {Exhibition: 'Indigenous History', Videos: Array(1), Name: 'Bitwolf', Photos: Array(2), Year: 1918, ...}
▶ {Name: 'Sub-Ex', Exhibition: 'War of 1812', Photos: Array(2), Tags: Array(2), Videos: Array(1), ...}
▶ {Photos: Array(2), Exhibition: 'Indigenous History', Year: 1962, Name: 'Fintone', Videos: Array(1), ...}
▶ {Name: 'Subin', Tags: Array(2), Exhibition: 'War of 1812', Videos: Array(1), Photos: Array(2), ...}

Full filter Test 1:
▶ {Videos: Array(1), Tags: Array(2), Year: 1751, Exhibition: 'Indigenous History', Name: 'Ronstring', ...}
▶ {Name: 'Flexidy', Videos: Array(1), Photos: Array(2), Year: 1786, Tags: Array(2), ...}
▶ {Name: 'Sonsing', Photos: Array(2), Exhibition: 'Indigenous History', Videos: Array(1), Year: 1828, ...}
▶ {Year: 1844, Name: 'Stringtough', Photos: Array(2), Videos: Array(1), Tags: Array(2), ...}

Full filter Test 2:
▶ {Year: 1758, Exhibition: 'War of 1812', Photos: Array(2), Name: 'Fintone', Videos: Array(1), ...}
▶ {Year: 1777, Videos: Array(1), Exhibition: 'War of 1812', Tags: Array(2), Photos: Array(2), ...}

Full filter Test 3:
▶ {Videos: Array(1), Year: 1777, Name: 'Vagram', Exhibition: 'Indigenous History', Tags: Array(2), ...}
▶ {Tags: Array(2), Year: 1786, Videos: Array(1), Name: 'Flexidy', Photos: Array(2), ...}
▶ {Videos: Array(1), Photos: Array(2), Exhibition: 'Indigenous History', Tags: Array(2), Name: 'Sonsing', ...}

Full filter Test 4:
▶ {Exhibition: 'Reminiscence', Videos: Array(1), Tags: Array(2), Year: 1701, Photos: Array(2), ...}
▶ {Videos: Array(1), Year: 1716, Photos: Array(2), Tags: Array(2), Exhibition: 'Reminiscence', ...}
▶ {Year: 1723, Name: 'Hativity', Tags: Array(2), Videos: Array(1), Exhibition: 'Reminiscence', ...}
▶ {Videos: Array(1), Photos: Array(2), Tags: Array(2), Name: 'Namfix', Year: 1740, ...}
▶ {Videos: Array(1), Exhibition: 'Reminiscence', Photos: Array(2), Tags: Array(2), Year: 1761, ...}

```

Algolia which contains just the id and name of each artifact so that we can use Algolia to search for an artifact by name and get reasonable suggestions.

## Index

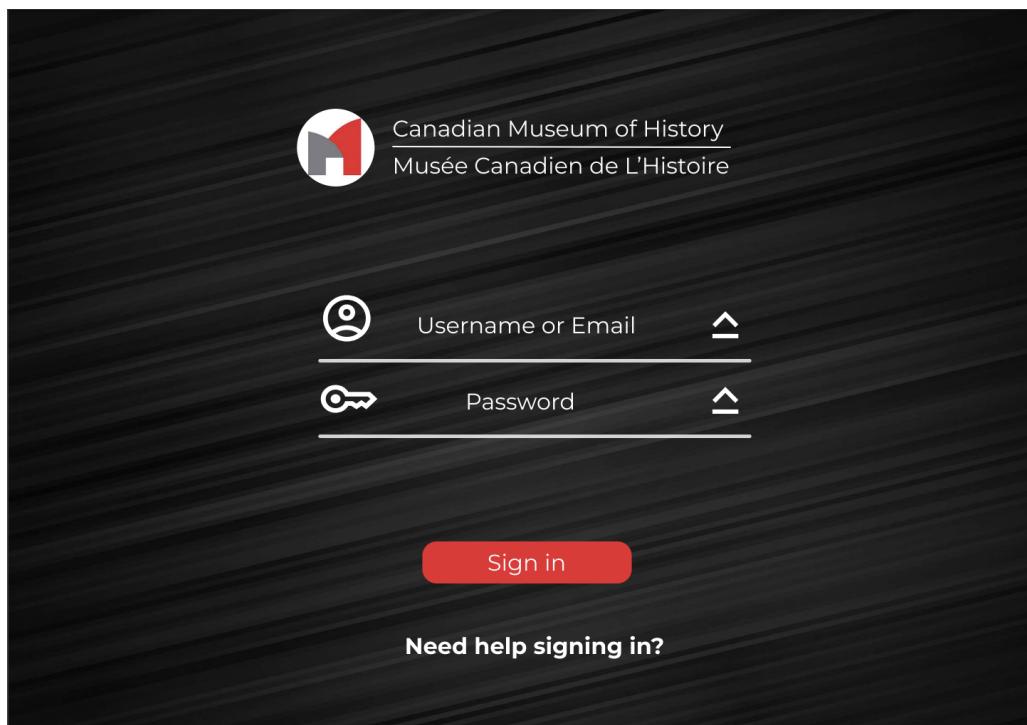
No. records 50 avg. record size 15.06B

The screenshot shows the Algolia Admin interface. At the top, there are buttons for 'New...', 'Add records', 'Manage index', and a refresh icon. To the right are 'Show hints' and a gear icon. Below the header, a navigation bar includes 'Browse' (which is underlined), 'Configuration', 'Replicas', 'Search API Logs', 'Stats', and 'UI Demos'. A search bar at the top has a dropdown arrow, a magnifying glass icon, and the placeholder 'Search'. To its right, it says '50 hits matched in 1ms'. Below the search bar are buttons for '+ Add Query Parameter' and 'Display preferences'. On the right, there are buttons for 'Query alternatives' (with a close icon), 'Details', 'Grid', 'List', and 'JSON'. The main area displays a single result row with a circled '1' icon, 'objectID' (value: "zScXV4lf5supUr9t5Fr1"), and 'name' (value: "Sonair"). To the right of the result is a small preview icon.

## Design Work (Figma)

By: Reet, George, Henry, Arshdeep

### Admin Pages:



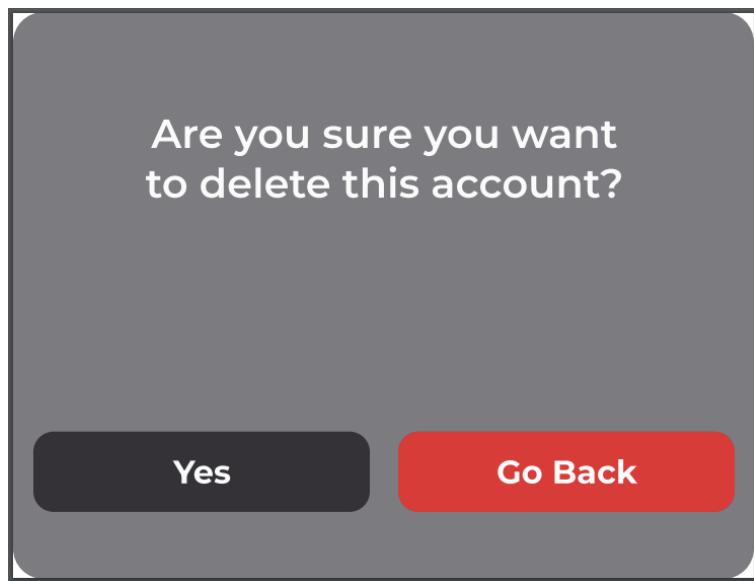


This form is used to add a new artifact. It includes fields for 'Name of Artifact' (text input), 'Date of exhibit' (dropdown menu with 'Year' and 'BC / AD' options), 'Exhibit' (dropdown menu), and a large 'Description' area (text area with a red border). A file upload icon with a camera and arrow symbol is located below the exhibit dropdown. A prominent 'Add' button is at the bottom.

Name of Artifact	Description
Date of exhibit	
Year	BC / AD
Exhibit	

The screenshot shows a mobile application interface for managing artifacts. At the top, the Canadian Museum of History logo and name are displayed, along with a "Sign out" button and a user profile icon. Below the header, there are fields for "Name of Artifact" and "Description". Under "Name of Artifact", there is a "Date of exhibit" section with dropdown menus for "Year" (with "BC / AD" options) and "Exhibit". To the right of these fields is a large, empty white box with a red border, likely a placeholder for an image or detailed description. Below the input fields is a button labeled "Update".

The screenshot shows a mobile application interface for managing administrators. At the top, the Canadian Museum of History logo and name are displayed, along with a "Sign out" button and a user profile icon. The main title is "Manage Admins". Below the title, there are four email input fields, each with a red trash can icon to the right. At the bottom, there are two buttons: "Return to Main Menu" and "Add Admin".



The image is a screenshot of a mobile application. At the top, it features the Canadian Museum of History logo (a stylized 'M' in red and blue) and the text "Canadian Museum of History" and "Musée Canadien de L'Histoire". To the right are "Sign out" and a gear icon. The main content area has a dark background with diagonal stripes. It displays the text "Provide Email and Password for new admin". Below this are three input fields: "Email" (with a single-line input field), "Password" (with a single-line input field), and "Re-enter Password" (with a single-line input field). At the bottom is a red "Submit" button.

 Canadian Museum of History  
Musée Canadien de L'Histoire

[Sign out](#)

### Profile Settings

Email

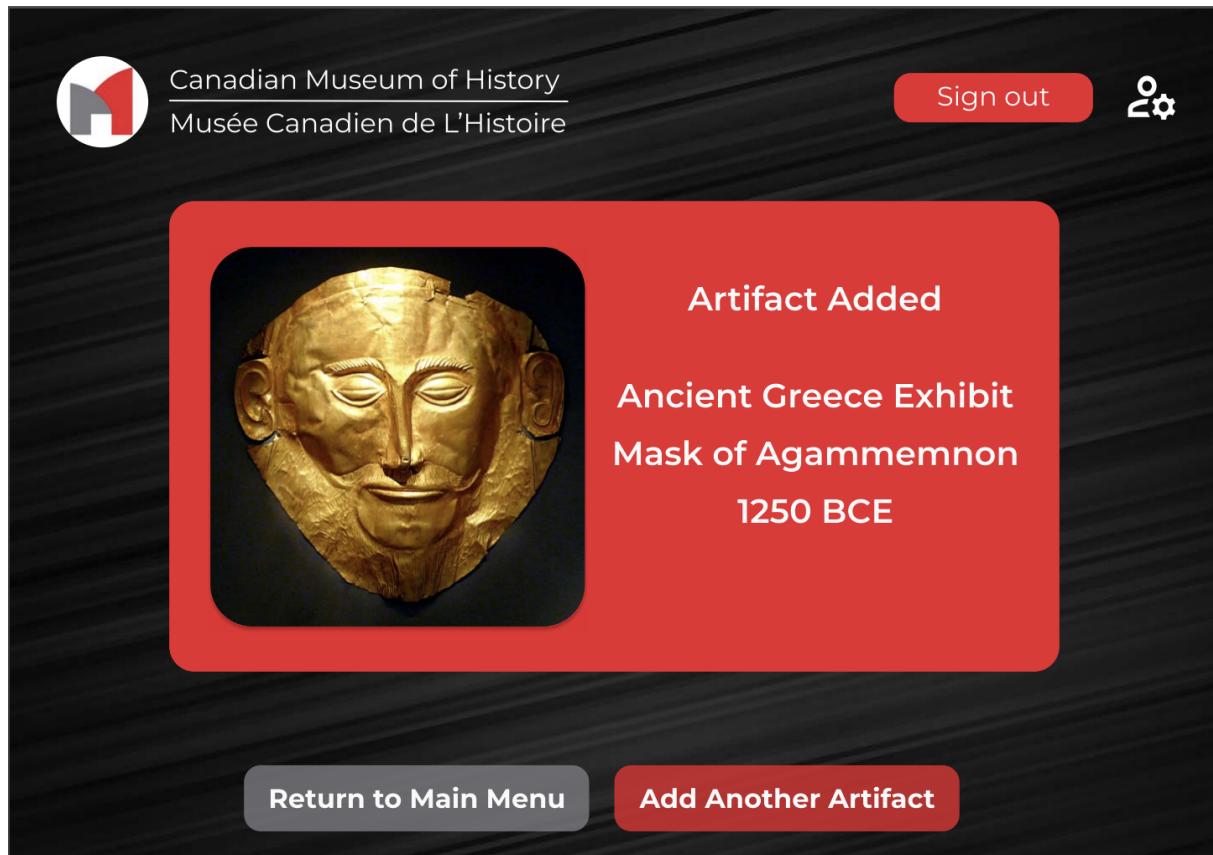
Password  [Reset](#)

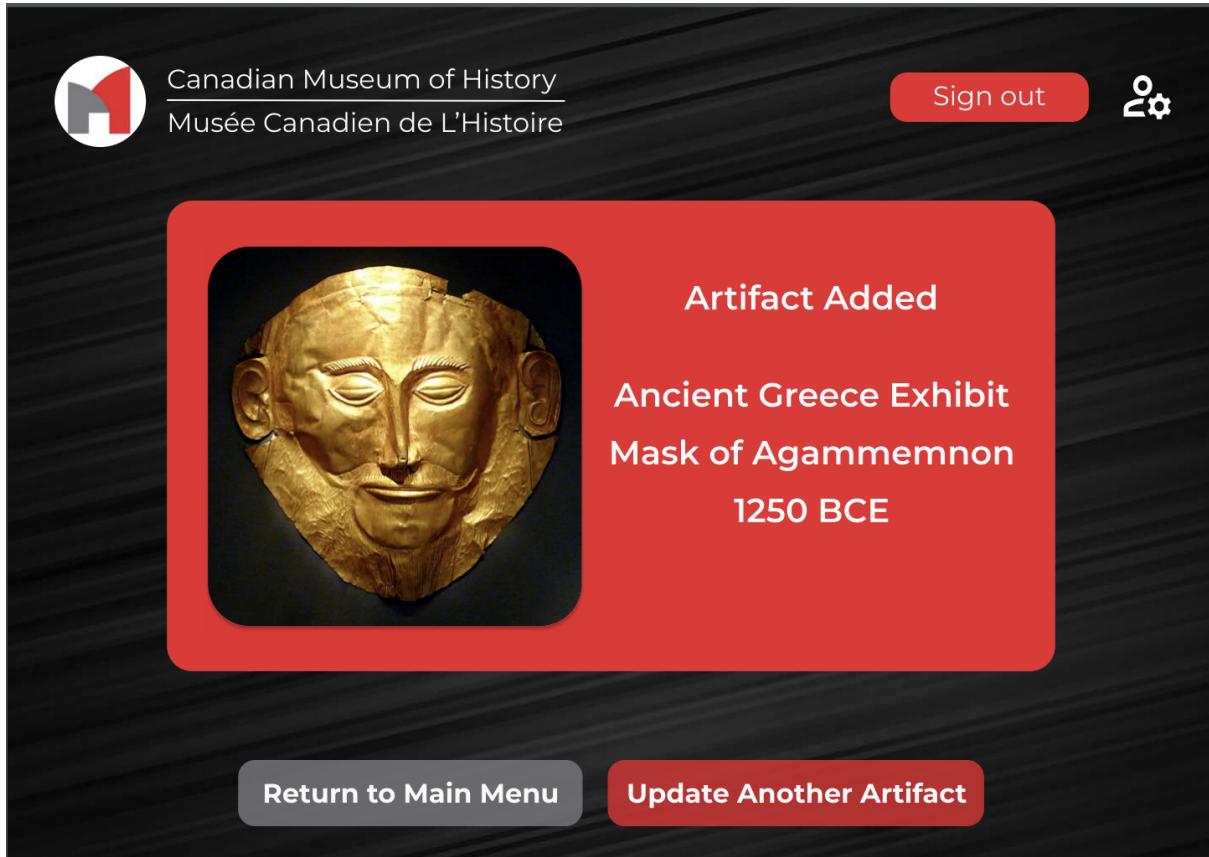
Re-enter Password  [Reset](#)

[Save & Exit](#)

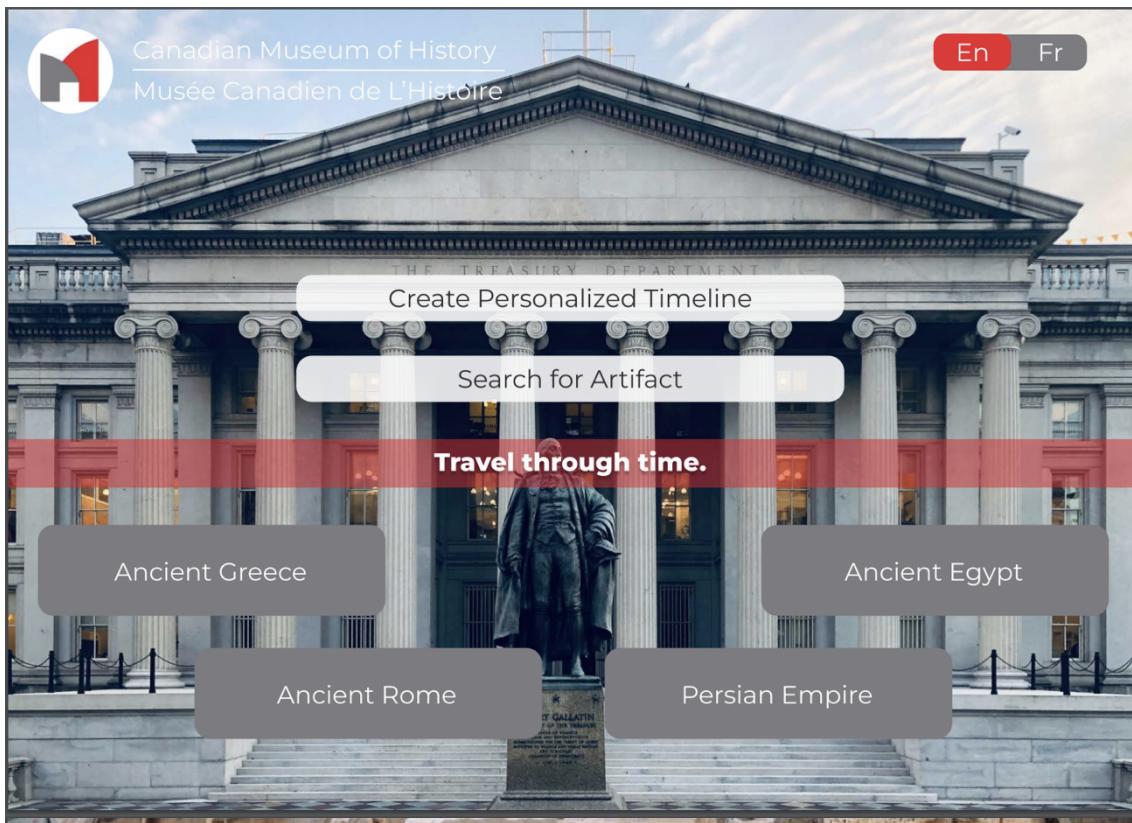
[Exit without Saving](#)

[Delete Account](#)



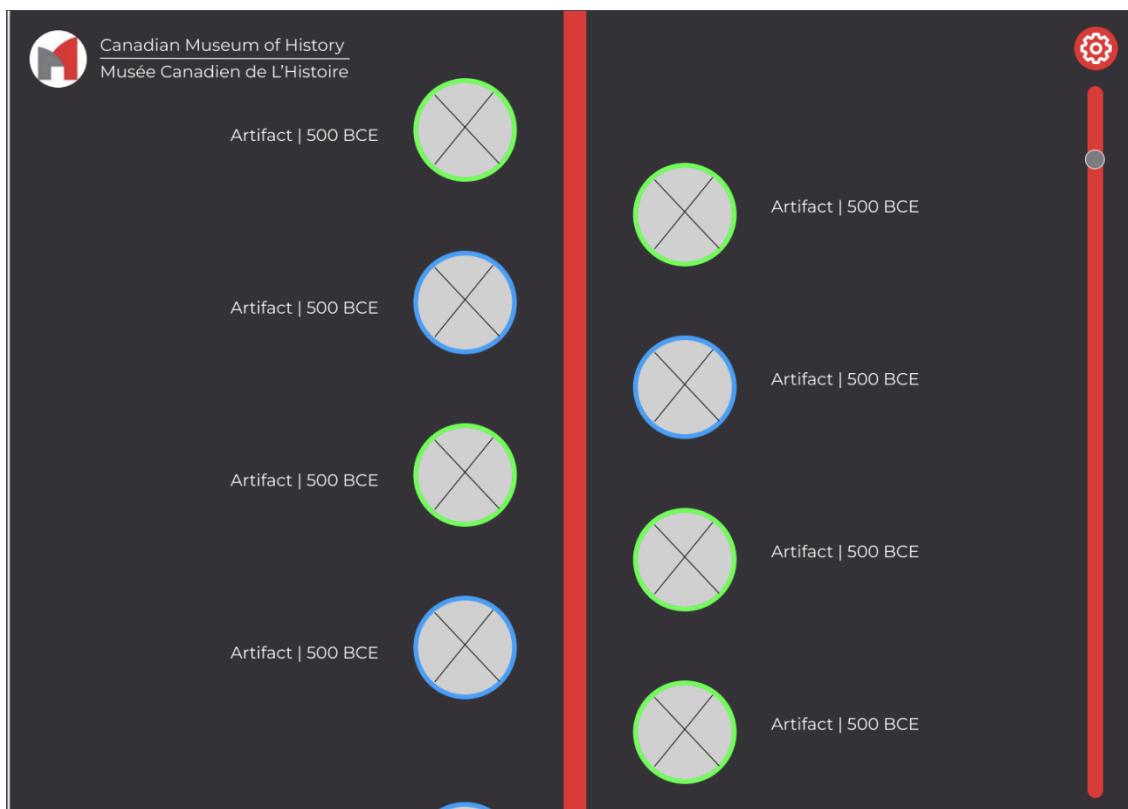


User Pages (main pages to reduce report size):



**Hovering over a button changes the background accordingly (done for all four, not shown here).**

The screenshot shows the Canadian Museum of History's search interface. At the top left is the museum's logo and name. Below it is a section titled "Select one or more exhibits" containing four buttons: "Ancient Greece", "Ancient Rome", "Persian Empire", and "Ancient Egypt". Underneath is another section titled "Select one or more tags" containing four buttons: "Paintings", "Technology", "Weapons", and "Tools". A horizontal timeline at the bottom spans from "2000 BCE" on the left to "Present" on the right, with two circular markers indicating specific points along the timeline.



**Canadian Museum of History**  
Musée Canadien de L'Histoire

### Mask of Agamemnon

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse consequat ut dui sit amet semper. Curabitur pharetra lacus in tellus tincidunt posuere. Pellentesque finibus purus vitae nunc efficitur vulputate. Suspendisse commodo magna at ornare porttitor. Sed dapibus sed dui ut tempus. Nunc elementum sagittis odio et suscipit. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus fermentum tempus facilisis. Ut in convallis purus, ac vestibulum quam. Fusce dolor lacus, finibus eu tellus non, porta vulputate felis. Donec pretium purus risus, et porta risus tempus eget. Vivamus a bibendum metus, vitae commodo tellus. Etiam volutpat justo diam, in rhoncus enim vulputate a.

[Return](#)   [Related Artifacts](#)   [Other Media](#)

Also, there is a mobile design version of everything that is formatted for smaller screens.

### React Work (Front End of the website)

By: Evan, Steven

So far, our work has been in learning react and integrating it with existing technologies.

Tested a variety of approaches, settled on a combination of react scripts, npm packages, and other solutions. We had initially decided on a webpack configuration that bundled assets together into single packages, however this proved too complex for our level of skill when working with multiple pages.

The primary tool that we adapted for a multipage website is react router. This provided us with a secure and efficient way to present the user with a consolidated multi-page setup and fits well with existing technologies.

We now have a solid base to build our website front-end and we are in the process of implementing the various services for our site.

## Sprint 2 (February 14<sup>th</sup> to February 28<sup>th</sup>):

### Sprint Planning – Sprint 2:

#### Overall Goals

- Implement the database management functions.
- Create an easy way to use the database (simple functions for retrieving artifact data and changing artifact data)
- Create the front page of the website like in the design.
- Create the filer/search option page.
- Create a timeline page where artifacts will be seen in chronological order.
- Admin login

#### Sprint 2 Plan:

▼ IT4P02 Sprint 2 14 Feb – 28 Feb (7 issues)

- IT4P02-1 The timeline should be able to retrieve data about artifacts to fill the timeline from a data base.
- IT4P02-5 Integrate the database into the timeline.
- IT4P02-6 Host the website so it is accessible on the web
- IT4P02-20 As an Administrator, I want to be able to click a login button to sign in. (LOGIN) AS AN ADMINISTRATOR, I...
- IT4P02-9 Landing Page and Exhibition Select (TIME LINE FORMAT) AS A USER, I ...
- IT4P02-10 As a User, I want to artifacts to be in chronological order (TIME LINE FORMAT) AS A USER, I ...
- IT4P02-11 As a User, I want to be able to see a basic information of an artifact when scrolling through the timeline (TIME LINE FORMAT) AS A USER, I ...

#### Scrum Meeting – Sprint 2 (February 19<sup>th</sup>, 2023):

- Yannick, Steven, George, Reet, Henry, and Evan attended.
- Discussed the accomplished work done by each member during the first sprint.
- Discussed the obstacles we have so far.
- Planned the next week tasks.
  - Steven
    - Currently working on front end of main page.
    - Next will be working on front end of timeline customizer page.
  - Reet
    - Working with Steven on front end (landing page and timeline customizer page).
    - Next will work on front end of timeline page itself to get it functioning.
  - George
    - Working on CSS design for Artifact Overview page.

- Yannick
  - Working on database functions (Edit, add artifact) and quires.
- Fahad
  - Currently not doing work due to personal/family reasons.
- Arshdeep
  - No work / Trying to figure out how to use GitHub.
- Evan
  - Working with Steven and Reet on front end (landing page and timeline customizer page).
- Henry

## Sprint Review / Sprint Retrospective – Sprint 2 (March 5<sup>th</sup>, 2023)

Meeting was postponed as per people availability.

- Everyone showed up.
- Yannick went over the data base functions.
- Reet went over the current state of the site.
  - Home and custom timeline page
- We discussed decided to change to a more open approach where people choose to work on what they want whenever they have time while mentioning it during the meeting.
- Plan to most of the site functionality done by the end of the next two sprints.
- Sprint 2 went at a velocity of 26 story points per sprint making it, so we are going at about an average of 23 story points per sprint.
- We ended up making the 3<sup>rd</sup> sprints backlog 35 story points with the expectation of not finishing everything since it's more than what we have done so far.

### Achieved

- Implement the database management functions.
- Create an easy way to use the database (simple functions for retrieving artifact data and changing artifact data)
- Create the front page of the website like in the design.
- Create the filer/search option page.

## Sprint plan at the end:

The screenshot shows a sprint backlog for IT4P02 Sprint 2, which ran from Feb 14 to Feb 28. The backlog contains 8 issues:

- IT4P02-4: The timeline should be able to retrieve data about artifacts to fill the timeline from a data base. Status: Done.
- IT4P02-6: Create Functions To modify artifacts in the Database. Status: In Progress.
- IT4P02-5: Allow for easy integration of the database into the timeline. Status: In Progress.
- IT4P02-6: Host the website so it is accessible on the web. Status: In Progress.
- IT4P02-20: As an Administrator, I want to be able to click a login button to sign in. Status: In Progress. Sub-task: (LOGIN) AS AN ADMINISTRATOR, I...
- IT4P02-9: Landing Page and Exhibition Select. Status: In Progress. Sub-task: (TIME LINE FORMAT) AS A USER, I ...
- IT4P02-10: As a User, I want to artifacts to be in chronological order. Status: In Progress. Sub-task: (TIME LINE FORMAT) AS A USER, I ...
- IT4P02-11: As a User, I want to be able to see a basic information of an artifact when scrolling through th... Status: In Progress. Sub-task: (TIME LINE FORMAT) AS A USER, I ...

**Landing Page and Exhibition Select**

Priority: Highest

Description:

- Utilize the database to display artifact names on a page

Child issues (75% Done):

- IT4P02-37: Make the Landing Page (RC, DONE)
- IT4P02-40: Style the landing page with CSS (S, DONE)
- IT4P02-43: Make Custome Timeline Page/Popup (RC, DONE)
- IT4P02-38: Make a page that shows all artifacts from a exhibition selection (TO DO)

**As a User, I want to artifacts to be in chronological order**

Priority: Highest

Description: This is basically covered in our Database work, as we will be querying artifacts in their chronological order

Child issues (50% Done):

- IT4P02-44: add capability to get data in order of the date from the database... (YC, DONE)
- IT4P02-45: implement the query into the website (TO DO)

Database Work (By: Yannick De Caluwe):

### Sample modification quires

```
console.log("addArtifact test:");
await addArtifact("War of 1812", "Left over couch", 1812, [ "http://dummyimage.com/166x141.png/5fa2dd/ffffff" ],
["https://firebasestorage.googleapis.com/v0/b/cosc4p02-project-a5335.appspot.com/o/sample_video.mp4%20(240p).mp4"],
["Furniture"], "This couch was damaged and left over after the war used by the military");
let data=await queryName("Left over couch");
console.log(data);
let id=data[0][0];//array should contain 1 element which has id in the first element
data=await getDescription(id);
console.log(data);

console.log("updateArtifactDescription test:");
await updateArtifactDescription(id, "This is a new description for the couch");
data=await getDescription(id);
console.log(data.content);

console.log("updateArtifactExhibit test:");
await updateArtifactExhibit(id, "Reminiscence");
data=await getArtifact(id);
console.log(data.Exhibition);

console.log("updateArtifactName test 1:");
await updateArtifactName(id, "This is a Test");
data=await queryName("Left over couch");
console.log(data);
console.log("updateArtifactName test 2:");
data=await queryName("This is a Test");
console.log(data);
```

```
console.log("updateArtifactYear test:");
await updateArtifactYear(id, 1900);
data=await getArtifact(id);
console.log(data.Year);

//Photos
console.log("addArtifactPhotos test:");
await addArtifactPhotos(id, "new photo url");
data=await getArtifact(id);
console.log(data.Photos);

console.log("removeArtifactPhotos test:");
await removeArtifactPhotos(id, "new photo url");
data=await getArtifact(id);
console.log(data.Photos);

console.log("updateArtifactPhotos test:");
await updateArtifactPhotos(id, [ "http://dummyimage.com/111x111.png/ddddd/000000", "http://dummyimage.com/246x190.png/ddddd/000000" ]);
data=await getArtifact(id);
console.log(data.Photos);
```

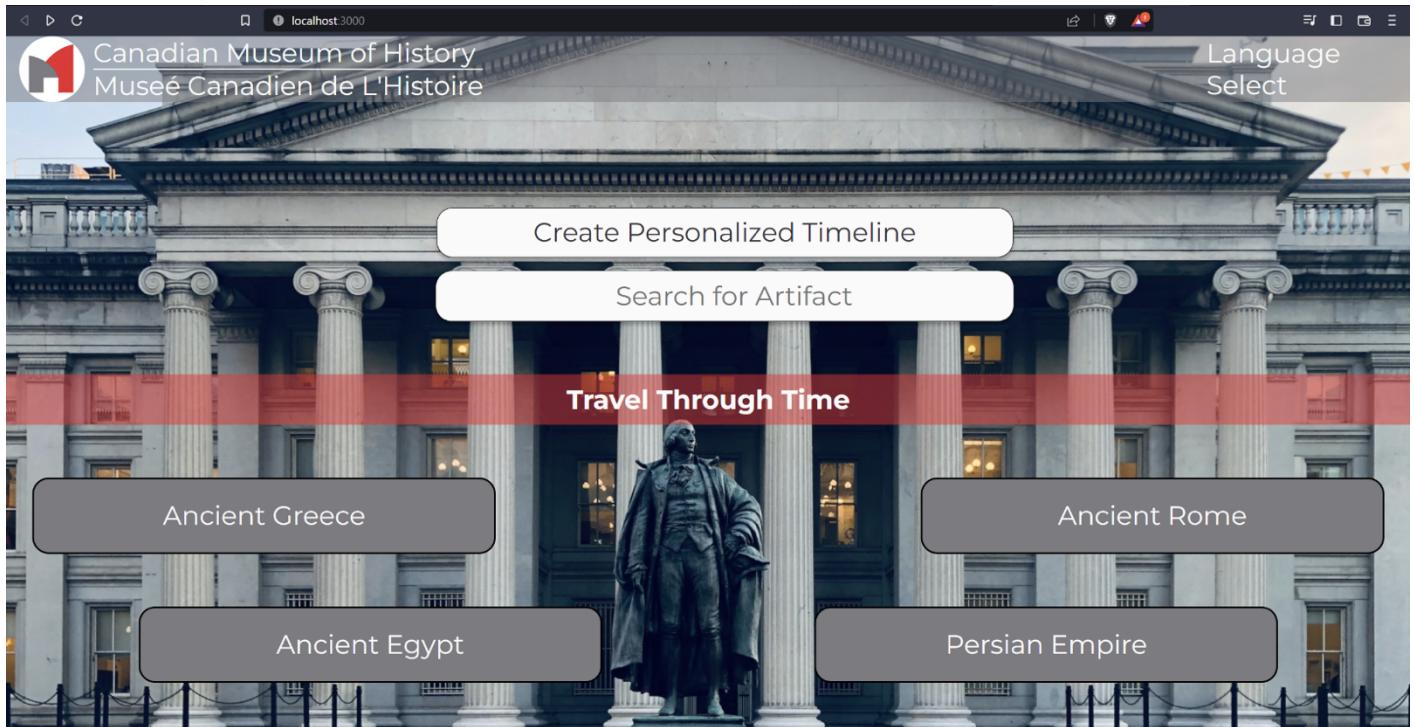
```

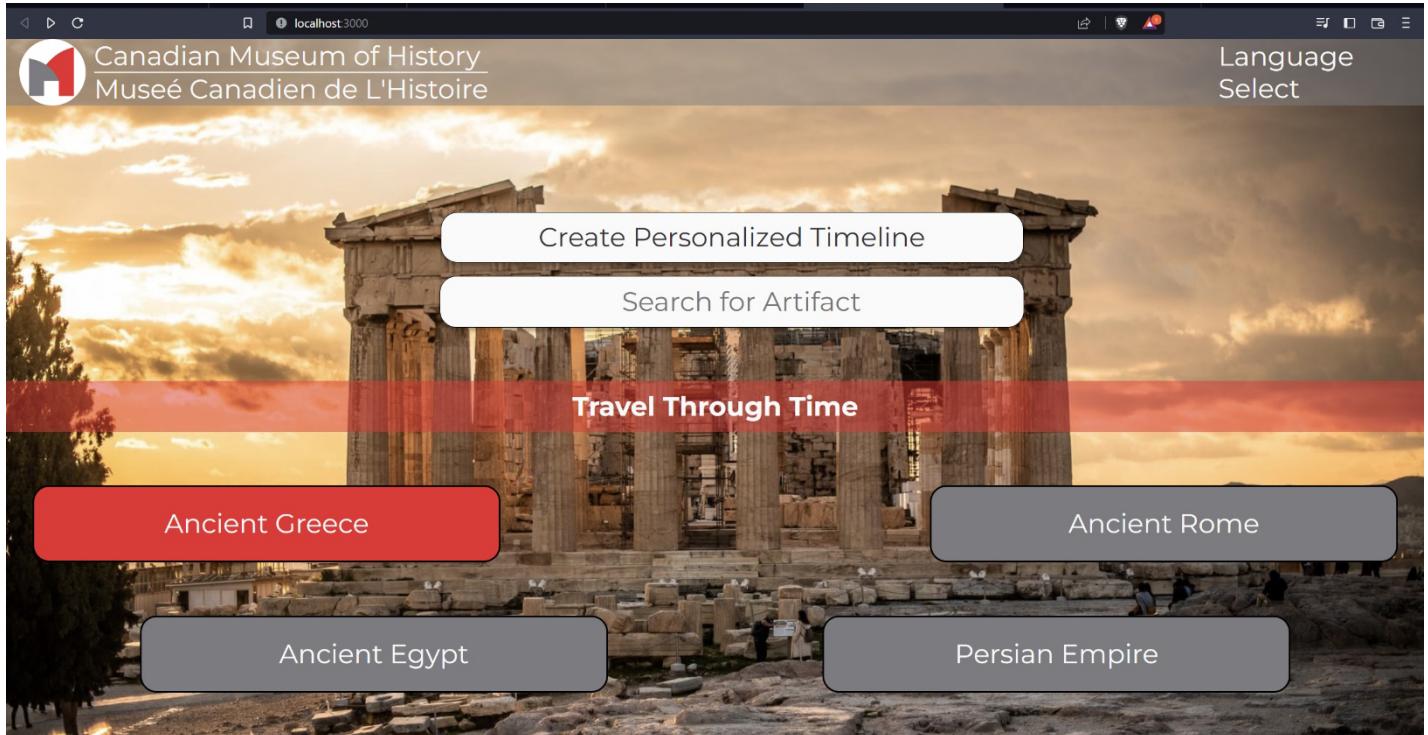
addArtifact test:
▶ [Array(2)]
▶ {content: 'This couch was damaged and left over after the war used by the military'}
updateArtifactDescription test:
This is a new description for the couch
updateArtifactExhibit test:
Reminiscence
updateArtifactName test 1:
▶ []
updateArtifactName test 2:
▶ [Array(2)]
updateArtifactYear test:
1900
addArtifactPhotos test:
▶ (2) ['http://dummyimage.com/166x141.png/5fa2dd/ffffff', 'new photo url']
removeArtifactPhotos test:
▶ ['http://dummyimage.com/166x141.png/5fa2dd/ffffff']
updateArtifactPhotos test:
▶ (2) ['http://dummyimage.com/111x111.png/ddddd/000000', 'http://dummyimage.com/246x190.png/ddddd/000000']

```

## React Work (Front End of the website)

By: Reet, Steven, Evan





**Canadian Museum of History**  
Museé Canadien de L'Histoire

Select one or more exhibits

Ancient Greece      Ancient Rome      Ancient Egypt      Persian Empire

Select one or more tags

Paintings      Technology      Weapons      Tools

Filter your date range

1000BCE      238AD

Search

## Sprint 3 (March 7<sup>th</sup> to March 21<sup>st</sup>):

Sprint Planning Meeting – Sprint 3 (March 7<sup>th</sup>, 2023):

- Everyone showed up.
  - Planned out what to do for the progress meeting on Thursday.
  - Yannick is going to work on the authentication after Thursday.
  - George will be working on the front end of the login page.
  - Reet will be working on generating the timeline.
  - Steven is busy and will be available for question and helping if needed.
  - Henry will learn react to be able to help with the front end of the site.
  - Evan will be working on some of the admin back end.

## Overall Goals:

- Timeline functionality
    - Being able to see artifacts based on the filters selected.
    - See details about a given artifact when it is clicked.
  - Authentication
    - Login page
  - Admin pages
    - Adding artifacts
    - Updating artifacts
    - Managing admin

## Sprint Plan:

IT4P02 Sprint 3 7 Mar – 21 Mar (6 issues)		35	0	0	Complete
	IT4P02-20 As an Administrator, I want to be able to click a login button to sign in. <a href="#">(LOGIN) AS AN ADMINISTRATOR, I...</a>	4			<a href="#">TO DO</a>
	IT4P02-12 As a User, I want to be able to see text-description of an artifact <a href="#">(ARTIFACT DETAILS) AS A USER, I ...</a>	4			<a href="#">TO DO</a>
	IT4P02-13 As a User, I want to be able to see images and videos of/about an artifact <a href="#">(ARTIFACT DETAILS) AS A USER, I ...</a>	4			<a href="#">TO DO</a>
	IT4P02-25 As a user, I want to be able to select a combination of exhibitions whose artifacts I want to see on the timeline so that I can com... <a href="#">(SEARCH/FILTER) AS A USER, I WA...</a>	4			<a href="#">TO DO</a>
	IT4P02-26 As a user I want to further filter the timeline of my chosen exhibits to only see artifacts discovered/brought to the museum/hyp... <a href="#">(SEARCH/FILTER) AS A USER, I WA...</a>	4			<a href="#">TO DO</a>
	IT4P02-22 As an Administrator, I should be able to add, edit, and delete timeline items <a href="#">(ADMIN) AS AN ADMINISTRATOR,...</a>	15			<a href="#">TO DO</a>

### Scrum Meeting – Sprint 3 (March 14<sup>th</sup>, 2023):

- Discussed what each one of us has done so far.
- Discussed all possible obstacles.
- Planned the following week tasks.
  - Steven
    - No progress.
    - Planning to work on mobile pages design.
  - Reet
    - Reet has completed the timeline page.
    - Visuals are done for the timeline as well.
    - One issue Reet was facing is that after creating a custom timeline, the timeline was not pulling the corresponding items from the database for the timeline.
    - Reet worked along with Yannick to fix the problem and now the timeline is successfully pulling the information for artifacts from database.
  - George
    - Working on login page design.
    - Planning on moving on to the landing page for administrative page.
  - Yannick
    - Worked along with Reet on fixing some database issues.
    - Started putting together something for the login page backend/authentication.
  - Fahad
    - Working on front end of Edit Artifact page.
  - Evan
    - Working on the backend of Add Artifact page.
    - Modifying timeline page.
  - Arshdeep
    - No progress.
  - Henry
    - Working alongside Evan on Add Artifact page.

## Sprint Review / Sprint Retrospective – Sprint 3 (March 19<sup>th</sup>, 2023)

- Reet showed off the working version of the timeline page.
- Showed off George's overview page.
- Yannick show the basic version of the authentication just waiting for the front end of the page.
- We have decided to take a different approach to the scrum meetings where we all go through exactly what we have done recording each person's response and what they plan to do in the next sprint. Already started on the 14<sup>th</sup> and will hopefully keep us more on track.
- Sprint 3 ended with 20 complete story points again just like the first keeping us very consistent 20 story points per sprint.

### Achieved:

- Being able to see artifacts based on the filters selected in chronological order.
- See details about a given artifact when it is clicked.
- Working on the rest

### Sprint Plan at End:

▼ IT4P02 Sprint 3 7 Mar – 21 Mar (6 issues) 0 15 20 Complete

<span style="color: green;">■</span> IT4P02-20 As an Administrator, I want to be able to click a login button to sign in. <span style="background-color: orange; border: 1px solid black; padding: 2px;">(LOGIN) AS AN ADMINISTRATOR, I...</span>	4 <span style="color: green;">Done</span> <span style="color: green;">Done</span>
<span style="color: green;">■</span> IT4P02-12 As a User, I want to be able to see text-description of an artifact <span style="background-color: orange; border: 1px solid black; padding: 2px;">(ARTIFACT DETAILS) AS A USER, I ...</span>	4 <span style="color: green;">Done</span> <span style="color: green;">Done</span>
<span style="color: green;">■</span> IT4P02-13 As a User, I want to be able to see images and videos of/about an artifact <span style="background-color: orange; border: 1px solid black; padding: 2px;">(ARTIFACT DETAILS) AS A USER, I ...</span>	4 <span style="color: green;">Done</span> <span style="color: green;">Done</span>
<span style="color: green;">■</span> IT4P02-25 As a user, I want to be able to select a combination of exhibitions whose artifacts I want to see on the timeline so that I can com... <span style="background-color: orange; border: 1px solid black; padding: 2px;">(SEARCH/FILTER) AS A USER, I WA...</span>	4 <span style="color: yellow;">In Progress</span> <span style="color: yellow;">In Progress</span>
<span style="color: green;">■</span> IT4P02-26 As a user I want to further filter the timeline of my chosen exhibits to only see artifacts discovered/brought to the museum/hypo... <span style="background-color: orange; border: 1px solid black; padding: 2px;">(SEARCH/FILTER) AS A USER, I WA...</span>	4 <span style="color: yellow;">In Progress</span> <span style="color: yellow;">In Progress</span>
<span style="color: green;">■</span> IT4P02-22 As an Administrator, I should be able to add, edit, and delete timeline items <span style="background-color: orange; border: 1px solid black; padding: 2px;">(ADMIN) AS AN ADMINISTRATOR,...</span>	15 <span style="color: orange;">In Progress</span> <span style="color: orange;">In Progress</span>

+ Create issue

### Personalized Timeline (By Reet Chahil):

 Niagara On The Lake  
History Museum

Select one or more exhibits

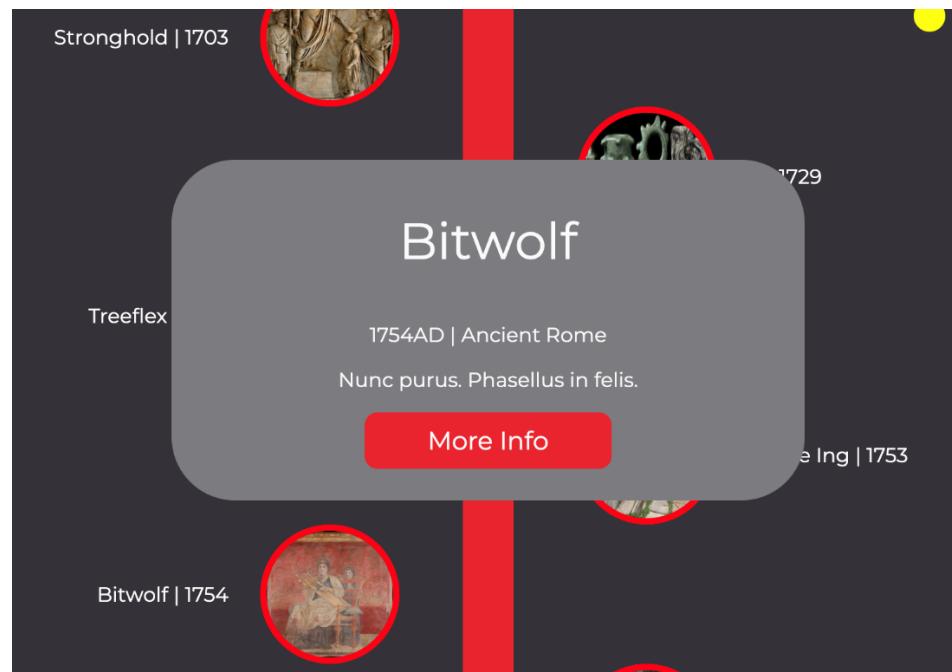
Ancient Greece      Ancient Rome      Ancient Egypt      Persian Empire

Select one or more tags

Paintings      Technology      Weapons      Tools

Filter your date range

1000BCE      1987AD



## Sprint 4 (March 21<sup>st</sup> to April 4<sup>th</sup>):

### Sprint Planning Meeting / Scrum Meeting – Sprint 4 (March 21<sup>st</sup>, 2023):

- Everyone showed up and discussed plans moving forward.
- What each person plans to do:
  - Steven
    - Getting the mobile layout done for the actual timeline page
  - Reet
    - Busy with exams / tests this coming week
  - George
    - Working towards finishing up login admin page
    - Working on the landing page for admin page with interactions for managing admins and stuff
  - Yannick
    - Needs to create buttons that triggers functionality.
    - Will Work on getting a system to manage administrators.
    - Helping other people.
  - Fahad
    - Will add picture capabilities to add/edit artifacts
    - Plan to make a page to pick an artifact to edit.
  - Evan
    - Well get the update button to add the artifact to the actual backend database.
  - Arshdeep
    - Will be working on the Mobile design for admin pages.
  - Henry
    - Helped with add artifact page CSS and code formatting

### Overall Goals:

- Authentication
  - login
- Admin pages
  - Adding artifacts
  - Updating artifacts
  - Managing admin
- Mobile Pages

## Sprint 4 Plan:

IT4P02 Sprint 4 21 Mar – 4 Apr (7 issues)

Issue ID	Description	Priority	Status
IT4P02-48	As an Administrator I should be able to update my password and username (ADMIN) AS AN ADMINISTRATOR,...	4	TO DO
IT4P02-47	As the main Administrator, I should be able to manage other admins (ADMIN) AS AN ADMINISTRATOR,...	4	TO DO
IT4P02-28	As a user, I want to be able to access the timeline on any device (desktops/mobile/laptop/tablet) and still effectively consume t... (QUALITY OF LIFE) AS A USER, I W...	10	TO DO
IT4P02-27	As a user, I want to be able to search for artifacts by name and be presented with a list of matching artifacts that I can jump to i... (SEARCH/FILTER) AS A USER, I WA...	4	TO DO
IT4P02-14	As a User, I want to be able to see related artifacts of the artifact (ARTIFACT DETAILS) AS A USER, I ...	4	TO DO
IT4P02-16	As a User, I want to be able to switch between images and videos (INTERACTIVE) AS A USER I WANT ...	5	TO DO
IT4P02-22	As an Administrator, I should be able to add, edit, and delete timeline items (ADMIN) AS AN ADMINISTRATOR,...	15	IN PROGRESS

+ Create issue

## Scrum Meeting – Sprint 4 (March 28<sup>th</sup>, 2023):

- Everyone showed up and went through what they did and will do.
- Helped each other with what we could.

- Steven
  - Didn't get anything done.
  - Will be working on the timeline mobile design and changing the museum logo and name across the site.
- Reet
  - Busy managing GitHub merges and helping with conflicts.
  - Helped George with login page.
  - Fixed CSS issue with leaking to other pages
  - Will work with Steven on the timeline CSS and mobile design.
- George
  - Working on the admin page with Reet, general front end admin page
  - Landing page after admin login
  - Will be finishing up the admin pages CSS, and working on all admin related pages.
- Yannick
  - Created the front end of the manage admin page, add admin page and admin settings page.
  - Will add functionality to the add, manage admins and admin settings pages.
- Fahad
  - Worked on the backend for editing pages/listing all the artifacts.
  - Had a problem with searching by name.
    - One of Yannick's functions created earlier will handle this problem.

- Finishing the edit, add and list artifact pages.
- Evan
  - Cleaned up the edit artifact page code.
  - Will add more functionality for edit artifacts page.
  - Will be Integrating edit artifacts page with the database.
- Arshdeep
  - Worked on mobile versions for admin side, not finished, will be pushed this week.
  - Will finish mobile admin page.
- Henry
  - Worked on the mobile view for the artifact page, but no solid progress.
  - No plans, open to helping others.

### Sprint Review / Sprint Retrospective – Sprint 3 (April 1<sup>st</sup>, 2023)

- Everyone but Evan showed up.
- Reet went through the entire current version of the site with everyone.
- Everyone went through what has been done and what was still incomplete.
- Also mentioned what each person should be working on in the coming sprint.
- Expecting not to get certain non-important features that would require a lot of work and are not important.
- Put together a final sprint of 2 weeks to get finalize everything.
- Sprint totals 39 story points but 15 of which is mostly done during the last two sprints. Leaving 24 story points left which with a bit of extra work shouldn't be a problem given our pace so far.
- Related artifacts idea has been changed to just create a new timeline based on the current artifact's tags.

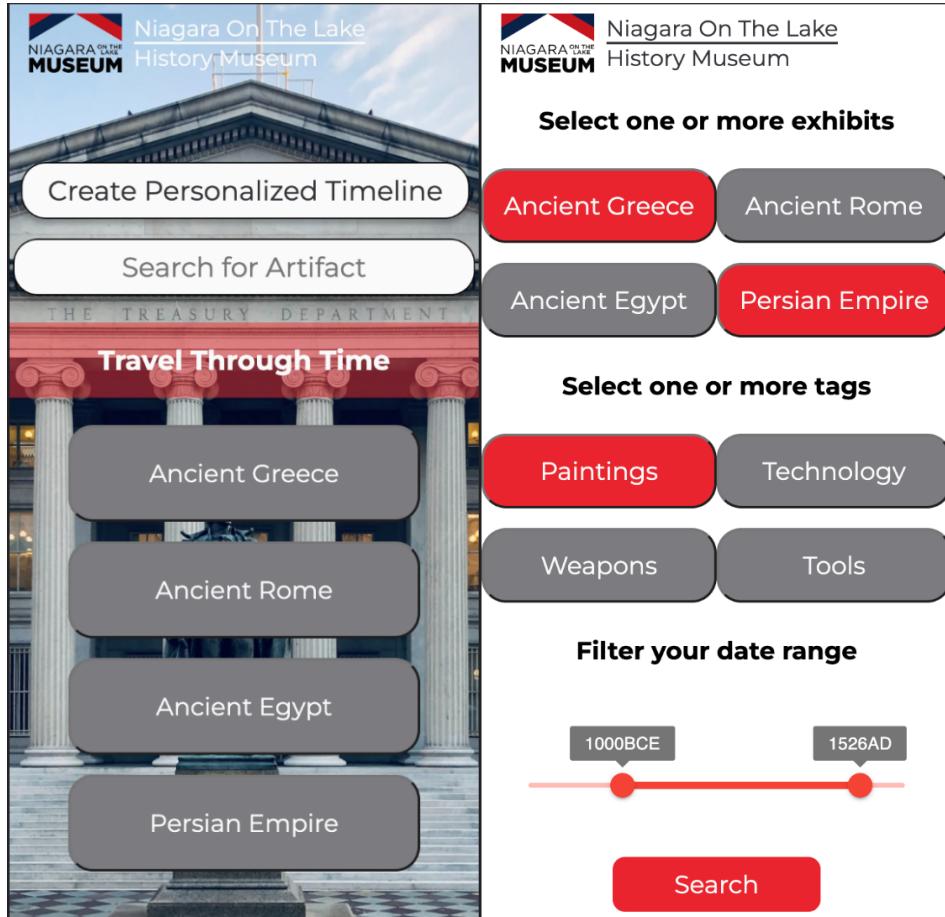
### Achieved:

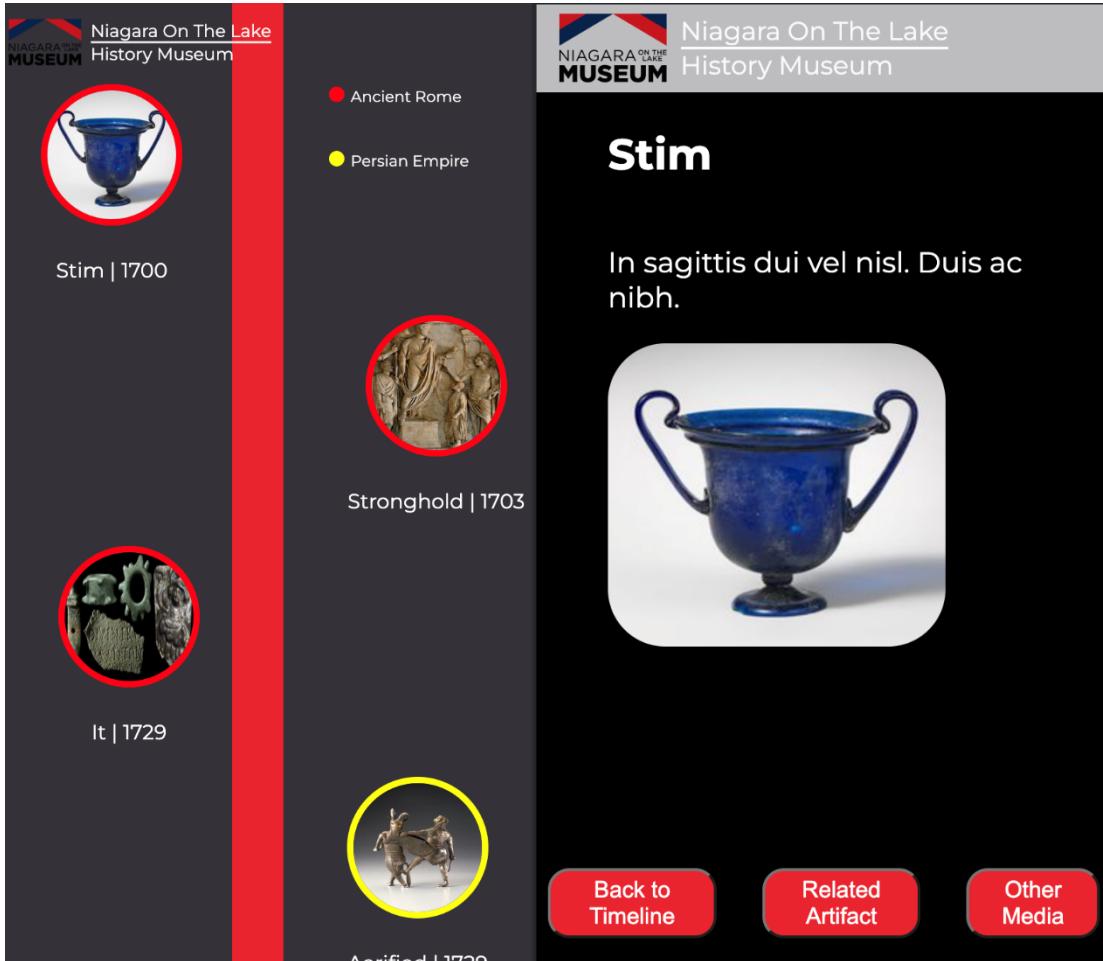
- Authentication
  - login
- Admin pages
  - Managing admin
    - Deleting
    - Adding
    - Settings
- Mobile Pages

## Sprint 4 Plan at End:

IT4P02 Sprint 4 21 Mar – 4 Apr (7 issues)			0	24	22	Complete
	IT4P02-48	As an Administrator I should be able to update my password and username	(ADMIN) AS AN ADMINISTRATOR,...	4	=	DONE ✓
	IT4P02-47	As the main Administrator, I should be able to manage other admins	(ADMIN) AS AN ADMINISTRATOR,...	4	=	DONE ✓
	IT4P02-28	As a user, I want to be able to access the timeline on any device (desktops/mobile/laptop/tablet) and still effectively consume t...	(QUALITY OF LIFE) AS A USER, I W...	10	=	DONE ✓
	IT4P02-27	As a user, I want to be able to search for artifacts by name and be presented with a list of matching artifacts that I can jump to in...	(SEARCH/FILTER) AS A USER, I WA...	4	=	DONE ✓
	IT4P02-14	As a User, I want to be able to see related artifacts of the artifact	(ARTIFACT DETAILS) AS A USER, I ...	4	=	IN PROGRESS ▾
	IT4P02-16	As a User, I want to be able to switch between images and videos	(INTERACTIVE) AS A USER I WANT ...	5	↗	IN PROGRESS ▾
	IT4P02-22	As an Administrator, I should be able to add, edit, and delete timeline items	(ADMIN) AS AN ADMINISTRATOR,...	15	↗	IN PROGRESS ▾
<a href="#">+ Create issue</a>						

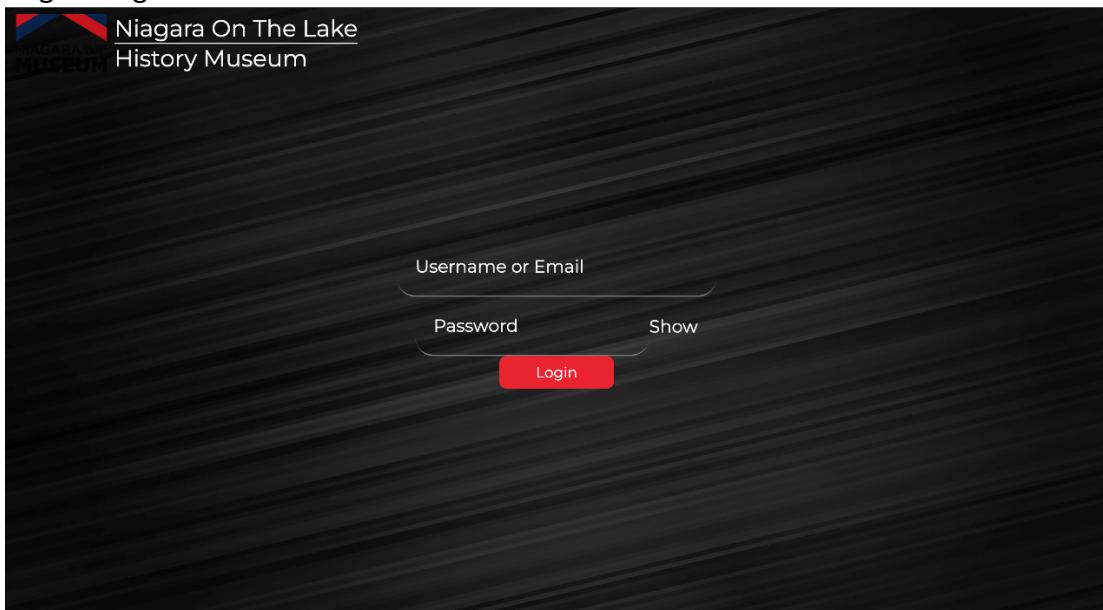
User Mobile Version (By Steven Sabharwal):

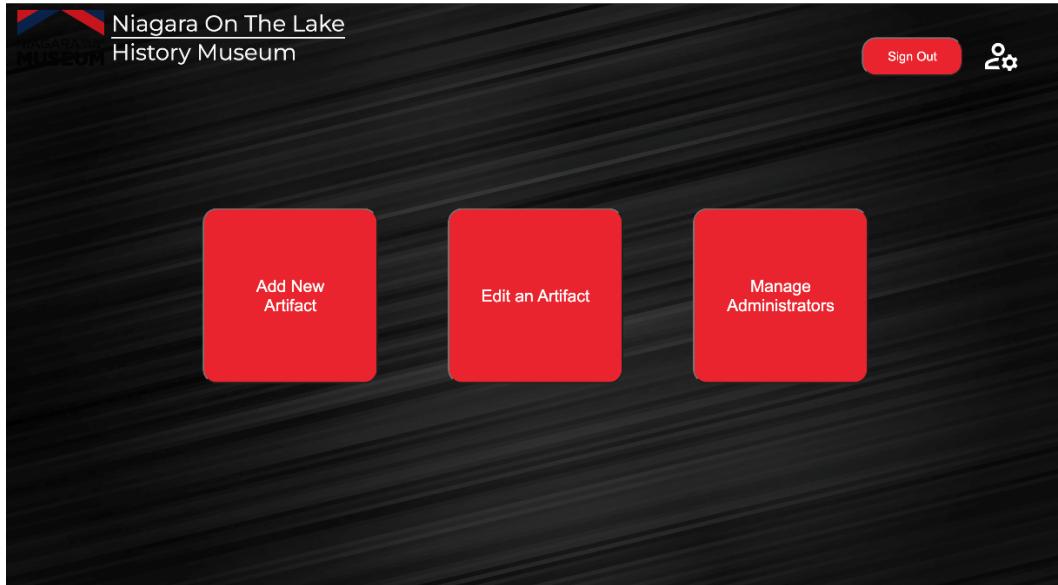




Admin Page Design (By George Barakat):

Login Page Design





### Manage Admin Work (By Yannick De Caluwe):

- Split screen view for reducing size of images.
- Formatting still needs to be cleaned up, but all the functionality is working.
- Can only be accessed by admins with the role “MainAdmin”
- All authentication for this and login pages were done by Yannick.





Canadian Museum of History  
Musée Canadien de L'Histoire

Sign Out

## Add Admin

Email

Password

Re-enter Password

Role

submit

Exit Without Saving



Canadian Museum of History  
Musée Canadien de L'Histoire

Sign Out

## Profile Settings

Email yannickdecaluwel@gma

Password

Re-enter Password

Save & Exit

Exit Without Saving

Delete Account

Add Artifacts (By Evan, Fahad):



**Niagara On The Lake**  
History Museum

LOGOUT

Name of Artifact	Description
<b>Date of exhibit</b>	
Year Age	
Exhibit	
<input type="button" value="UPLOAD FILE"/> <input type="button" value="ADD"/>	
<input type="button" value="Upload File (click or drop here)"/>	

Edit Artifacts (By Fahad):

Get populated by clicking an artifact from the list on the next page.



**Niagara On The Lake**  
History Museum

LOGOUT

Name Asoka	Description Integer a nibh. In quis justo. Maecenas rhoncus aliquam lacus. Morbi quis tortor id nulla ultrices aliquet.
Year 1922	
Age AD	
Exhibit Ancient Egypt	
<input type="button" value="Upload File (click or drop here)"/>	

Artifacts List for Edit Artifacts (By Fahad, Reet helped with css):

The screenshot shows a mobile application interface for the Niagara On The Lake History Museum. At the top, there is a logo for 'NIAGARA ON THE LAKE MUSEUM' and the text 'Niagara On The Lake History Museum'. Below this, the word 'Articles' is displayed. A search bar labeled 'Search for Artifact' is present. The main content area displays a list of seven artifacts, each in its own red-bordered box:

Artifact Name	Year	Origin
Holdlamis	1870	Ancient Rome
Asoka	1922	Ancient Egypt
Holdlamis	1832	Persian Empire
Bigtax	1836	Ancient Rome
Overhold	1983	Ancient Rome
Fix San	1749	Ancient Egypt
Job	1801	Persian Empire

Each artifact entry includes a small circular image of the object.

## Sprint 5 (April 4<sup>th</sup> to April 18<sup>th</sup>)

### Overview:

- Finish off CSS and functionality of edit and add artifacts pages.
- Add more interactivity to admin overview page.
- Host the webpage.
- Software testing.
- Clean up and add some extra features.

### Sprint 5 Plan:

IT4P02 Sprint 5			Add dates	(7 issues)	15	24	0	Start
	IT4P02-22	As an Administrator, I should be able to add, edit, and delete timeline items	(ADMIN) AS AN ADMINISTRATOR...		15			IN PROGRESS
	IT4P02-16	As a User, I want to be able to switch between images and videos	(INTERACTIVE) AS A USER I WANT ...		5			IN PROGRESS
	IT4P02-14	As a User, I want to be able to see related artifacts of the artifact	(ARTIFACT DETAILS) AS A USER, I ...		4			IN PROGRESS
	IT4P02-17	As a User, I want to be able to play videos on the site	(INTERACTIVE) AS A USER I WANT ...		4			TO DO
	IT4P02-6	Host the website so it is accessible on the web			1			TO DO
	IT4P02-19	As a User, I want to be able to export videos and images	(INTERACTIVE) AS A USER I WANT ...		5			TO DO
	IT4P02-18	As a User, I want to be able to zoom on images	(INTERACTIVE) AS A USER I WANT ...		5			TO DO
<a href="#">+ Create issue</a>								

### Scrum Meeting 1 – Sprint 5 (April 9<sup>th</sup>, 2023):

- Steven
  - Made more fixes to mobile CSS.
  - Finished all pages except artifact overview.
- Reet
  - No progress.
  - Open to help anyone in need of help.
- George
  - Will be working on Final report.
  - Will try to help with software testing.
- Yannick
  - Cleaned up the manage admin side of things.
  - Added confirmations for account deletions.
  - Verifies emails are actual emails.
  - Verifies password verification.

- Fahad
  - Finished the Add/Edit artifact pages (backend).
- Arshdeep
  - Working on edit artifact CSS.
  - Helped Fahad on finishing the Add/Edit artifact pages.
- Evan
  - Looking into software testing.
  - Getting ready to write tests.
- Henry
  - Made the logo link to the homepage.
  - Changing the CSS design for some buttons.

### Scrum Meeting 2 – Sprint 5 (April 21<sup>st</sup>, 2023):

- Steven
  - Currently working on Timeline page CSS (for mobile view)
  - Artifact overview page CSS for both mobile and desktop.
  - Fixing any small issues left with the website with Reet.
- Reet
  - Artifact Overview front end (buttons functionality)
  - Helping members with other stuff.
  - Fixing any small issues left with the website with Steven.
- George
  - Working on Final progress Report.
  - Cleaning up Jira.
- Yannick
  - Working along with George on progress report 2.
  - And available to fix any bugs found in testing backend.
- Fahad
  - Currently not doing work due to personal/family reasons.
- Arshdeep
  - Finished CSS for Edit Artifact.
  - Tried to help with Artifact Overview.
- Evan
  - Creating the unit tests.
  - Learning more about testing.

- Henry
    - Converted login page into component for testing. Was not committed due to being unnecessary.
    - Created a version of edit artifact page that was not committed to main along with Evan.

Sprint Review / Sprint Retrospective – Sprint 2 (April 25<sup>th</sup>, 2023):

- Just a review meeting since the program is done to the best, we could give the time constraint.
  - Once the program was looked over the final presentation was planned out
  - Decided who was presenting and what they were presenting.

### Achieved:

- Fixing all CSS issues.
  - Implementing unit tests.
  - Add/Edit and delete artifacts (Admin functionalities)
  - Host the website.

## Sprint 5 Plan at End:

IT4P02 Sprint 5 4 Apr – 25 Apr (6 issues)		0	0	20	Complete 80%
<input checked="" type="checkbox"/>	IT4P02-22 As an Administrator, I should be able to add, edit, and delete timeline items <a href="#">(ADMIN) AS AN ADMINISTRATOR...</a>	15	<span style="color: red;">✗</span>	<span style="color: green;">Done</span>	<span style="color: green;">Done</span>
<input checked="" type="checkbox"/>	IT4P02-14 As a User, I want to be able to see related artifacts of the artifact <a href="#">(ARTIFACT DETAILS) AS A USER...</a>	4	<span style="color: yellow;">=</span>	<span style="color: green;">Done</span>	<span style="color: green;">Done</span>
<input checked="" type="checkbox"/>	IT4P02-6 Host the website so it is accessible on the web	1	<span style="color: red;">✗</span>	<span style="color: green;">Done</span>	<span style="color: green;">Done</span>
<input checked="" type="checkbox"/>	IT4P02-49 Fix issues with the timeline		<span style="color: yellow;">=</span>	<span style="color: green;">Done</span>	<span style="color: green;">Done</span>
<input checked="" type="checkbox"/>	IT4P02-50 Add tag and exhibit data to the artifact overview page		<span style="color: yellow;">=</span>	<span style="color: green;">Done</span>	<span style="color: green;">Done</span>
<input checked="" type="checkbox"/>	IT4P02-51 Fix styling/layout issues on artifact overview page		<span style="color: yellow;">=</span>	<span style="color: green;">Done</span>	<span style="color: green;">Done</span>
<a href="#">+ Create issue</a>					

CSS fixes + (Display year & category feature) (By Steven):

Cut off the description text over 250 words.

**Niagara On The Lake**  
History Museum

**Sonair**  
**1695 BC | Ancient Greece**  
Tags: Paintings, Tools

**Description**

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[Back to Timeline](#) [Related Artifacts](#)

**Job**

841 BC | Ancient Greece

Tags: Weapons, Paintings

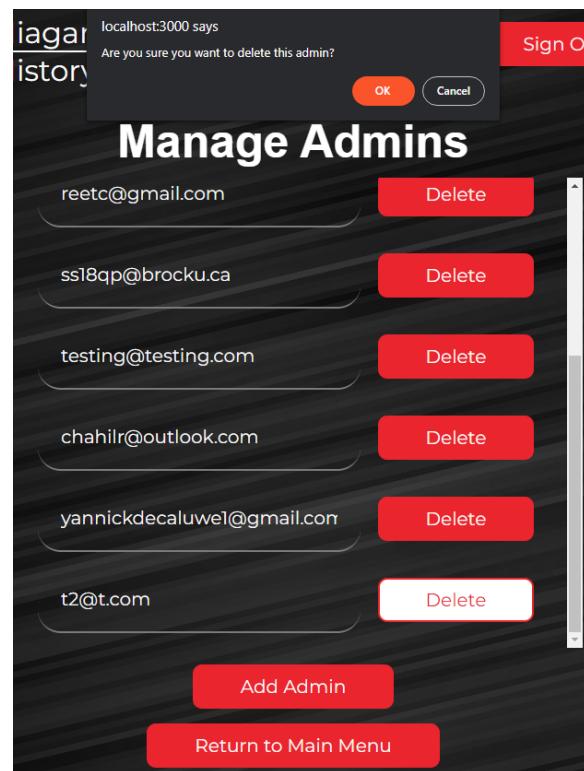
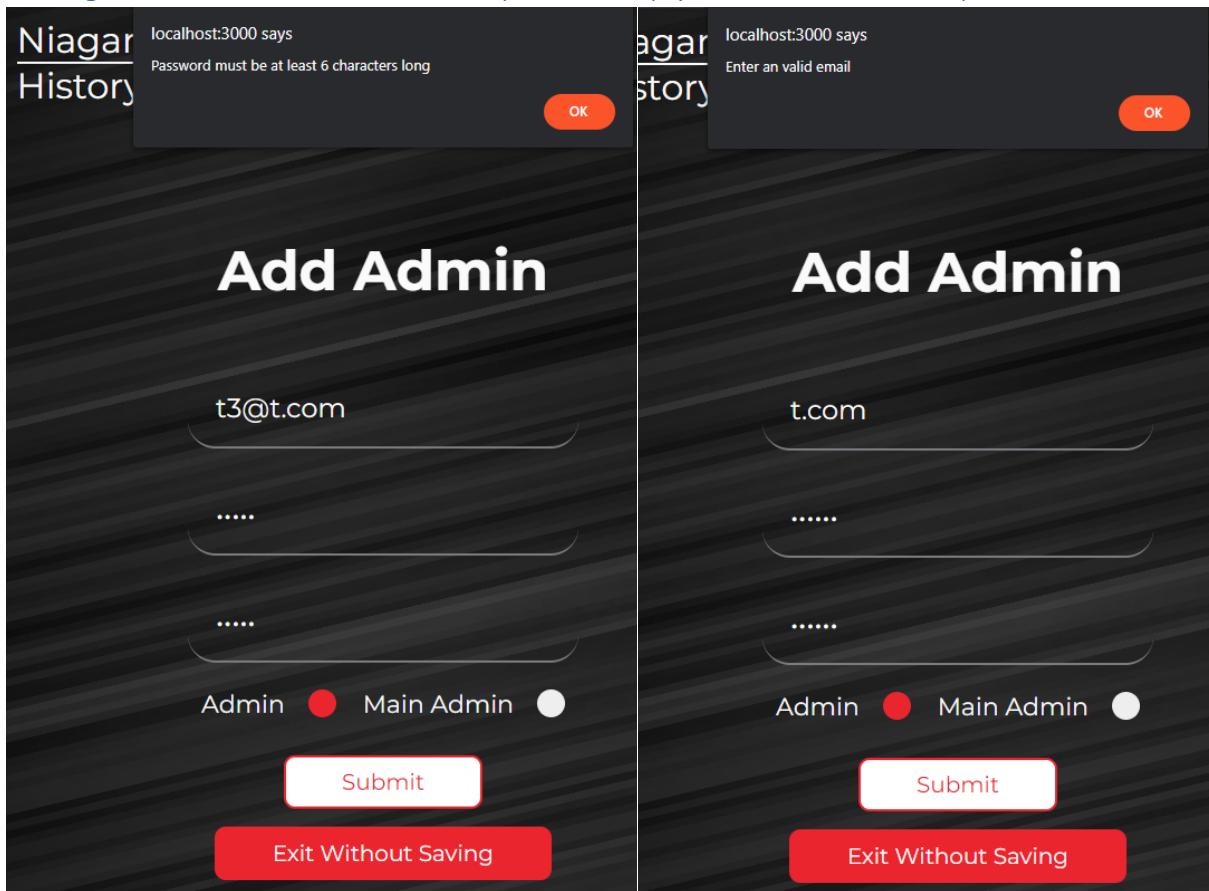
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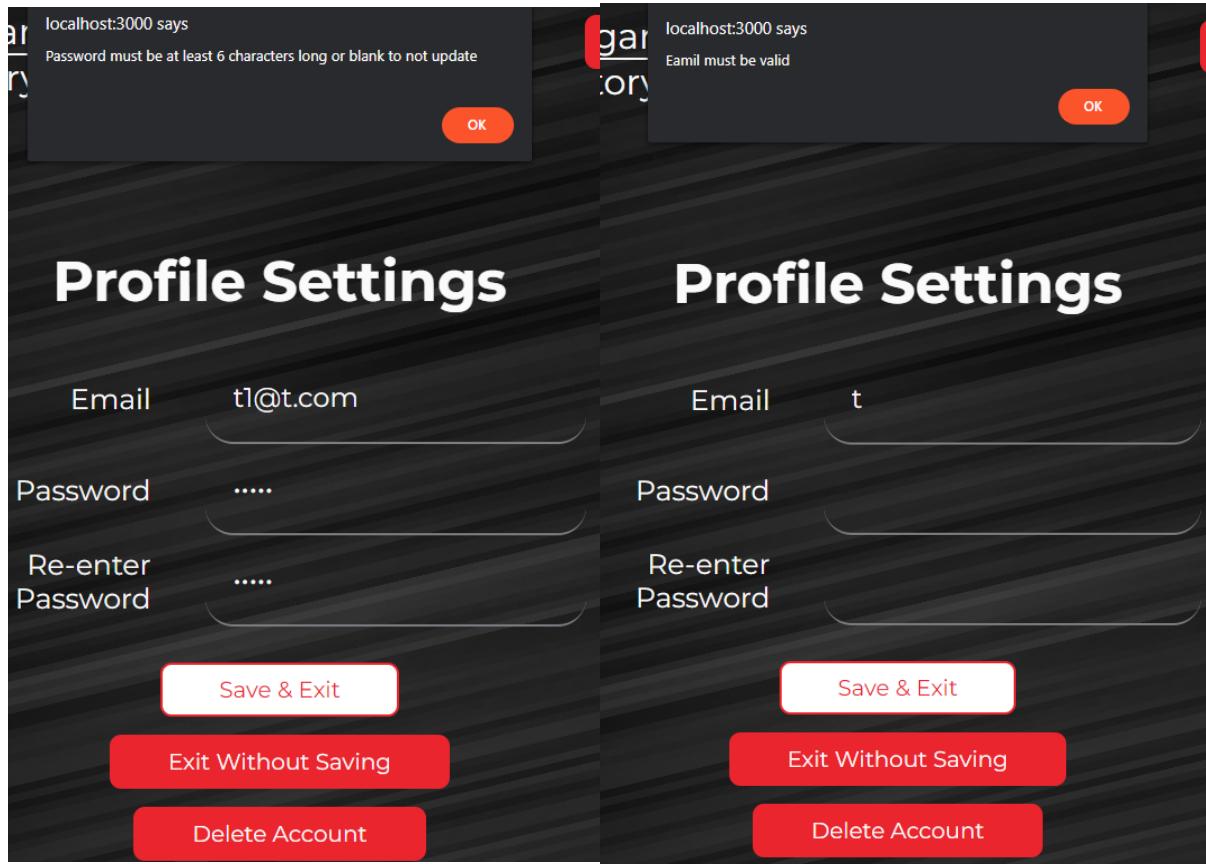
[More Info](#)

CSS fixes (By Steven & Reet):



### Manage Admin Confirmation and Input Limits (By Yannick De Caluwe):





Software testing (By Evan Galea):

```

PASS  src/_tests/_router.test.js
PASS  src/_tests/_App.test.js
PASS  src/_tests/_YearRangeslider.test.js
PASS  src/_tests/_SelectButton.test.js
PASS  src/_tests/_SearchSuggestions.test.js
PASS  src/_tests/_Home.test.js
PASS  src/_tests/_userEvent.test.js
PASS  src/_tests/_AdminPage.test.js
PASS  src/_tests/_onClick.test.js
PASS  src/_tests/_Greeting.test.js
PASS  src/_tests/_ArtifactOverview.test.js
PASS  src/_tests/_ArtifactPreview.test.js
PASS  src/_tests/_ArtifactBubble.test.js
PASS  src/_tests/_Logo.test.js

Test Suites: 14 passed, 14 total
Tests:      22 passed, 22 total
Snapshots:  0 total
Time:       6.487 s, estimated 30 s
Ran all test suites.

Watch Usage: Press w to show more. █

```

Basic run of all tests.

Example of Continuous integration test detecting an incompatibility on GitHub.

The screenshot shows a GitHub Actions CI run for a project. The 'Install and build' step has failed 3 days ago in 1m 2s. The 'Run tests' log shows several test files passing, but ends with an error:

```

177    console.log
178
179
180      at Object.<anonymous> (src/_tests__AdminPage.test.js:41:12)
181
182 PASS src/_tests__ArtifactPreview.test.js
183 PASS src/_tests__Logo.test.js
184 PASS src/_tests__Greeting.test.js
185 PASS src/_tests__ArtifactOverview.test.js
186 PASS src/_tests__Home.test.js
187 PASS src/_tests__App.test.js
188 PASS src/_tests__OnClick.test.js
189 PASS src/_tests__UserEvent.test.js
190
191 Test Suites: 1 failed, 14 passed, 15 total
192 Tests:       1 failed, 22 passed, 23 total
193 Snapshots:   0 total
194 Time:        9.653 s
195 Ran all test suites.
196 Error: Process completed with exit code 1.

```

The 'Run tests' step is highlighted in red. Below it, the 'Build app', 'Post Checkout', and 'Complete job' steps are shown with their execution times: 0s, 0s, and 1s respectively.

Observing how the system and how the test suite behave without access to contact the database.

The terminal window on the left shows a failing unit test for the 'Home' page. The test expects a substring 'Create Personalized Timeline' in the received string, but instead receives 'Niagara On The Lake History Museum Travel Th...ent Greece Ancient Rome Ancient Egypt Persian Empire'. The test fails at line 29.

```

PASS  src/_tests__SelectButton.test.js
PASS  src/_tests__router.test.js (7.133 s)
PASS  src/_tests__SearchSuggestions.test.js
PASS  src/_tests__YearRangeSlider.test.js (6.292 s)
FAIL  src/_tests__Home.test.js
● Home page

  expect(received).toContain(expected) // indexOf

  Expected substring: "Create Personalized Timeline"
  Received string:  "Niagara On The Lake History Museum Travel Th...ent Greece Ancient Rome Ancient Egypt Persian Empire"

    27 |
    28 |     });
    > 29 |     expect(container.textContent).toContain("Create Personalized Timeline");
    30 |   });
    31 |
    32 |

  at Object.<anonymous> (src/_tests__Home.test.js:29:33)

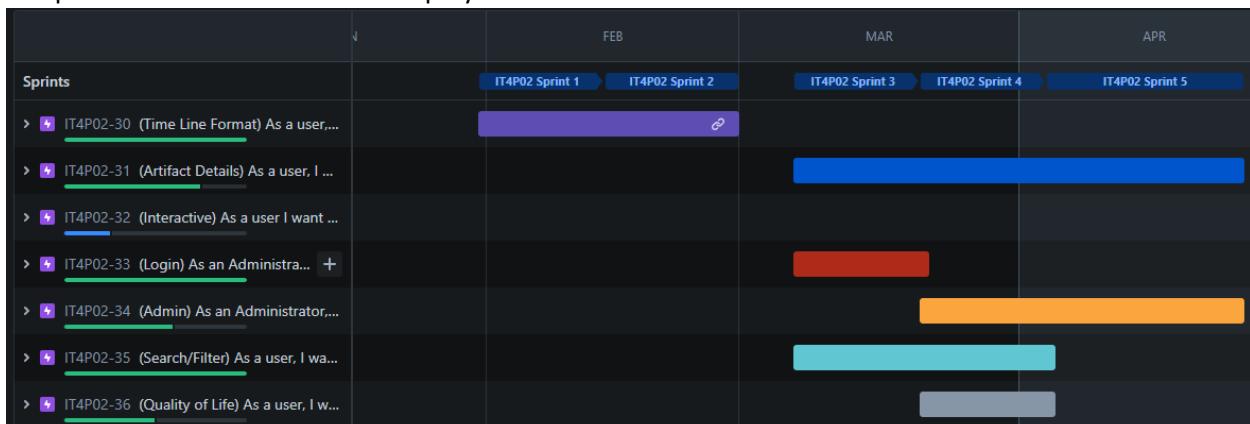
```

The browser window on the right shows the Niagara On The Lake History Museum website. The URL is 'NIAGARA ON THE LAKE HISTORY MUSEUM'. The page features a large statue and text boxes for 'Ancient Greece', 'Ancient Rome', 'Ancient Egypt', and 'Persian Empire'.

All unit tests code could be found on GitHub.

## Backlog Discussion:

After deciding on creating a timeline as a group we created possible features the program would need. Then from there, we made a bunch of different user stories that were added to Jira and throughout the sprints were updated and used to keep track of the current progress and what needed to still be done. We made more stories than what we were able to accomplish which became clear after the second sprint since we were quite behind on the expected story points completed. Because of this, some stories were expected to not get completed (the ones that were given a lower priority) since even if not everything would be done most would be and it would be just missing some small features. A common occurrence was that we would move at least one or more stories from one sprint to another. From the original backlog, we finished 108 story points throughout the 5 sprints and missed 48 story points from the initial backlog. One of the main reasons for this was that 20 of the missing story points were already found to not be possible after the second sprint due to the amount of work needed. These story points related to the ability of an admin being able to roll back the database to an older version. But after working with Firestore to make the database we realized this was not doable with Firestore and would require an entire rework of how everything was stored and would drastically increase the amount of space required to store and keep track of its changes. Overall, each sprint took items from the backlog using toughs with the highest priority and attempting to keep the number of story points reasonable. Additionally, the stories were split among epics which were about a given part of the program like login, admin features, timeline format, artifact details, interactive components, search, and quality of life features. Below is a road map of what epics were worked on during a given sprint. The main thing missing is that the database was also done in the first two sprints but was not given an epic. The overall backlog could have been better managed but was done in a way so that everything that was completed worked and could be deployed without the rest of the features.

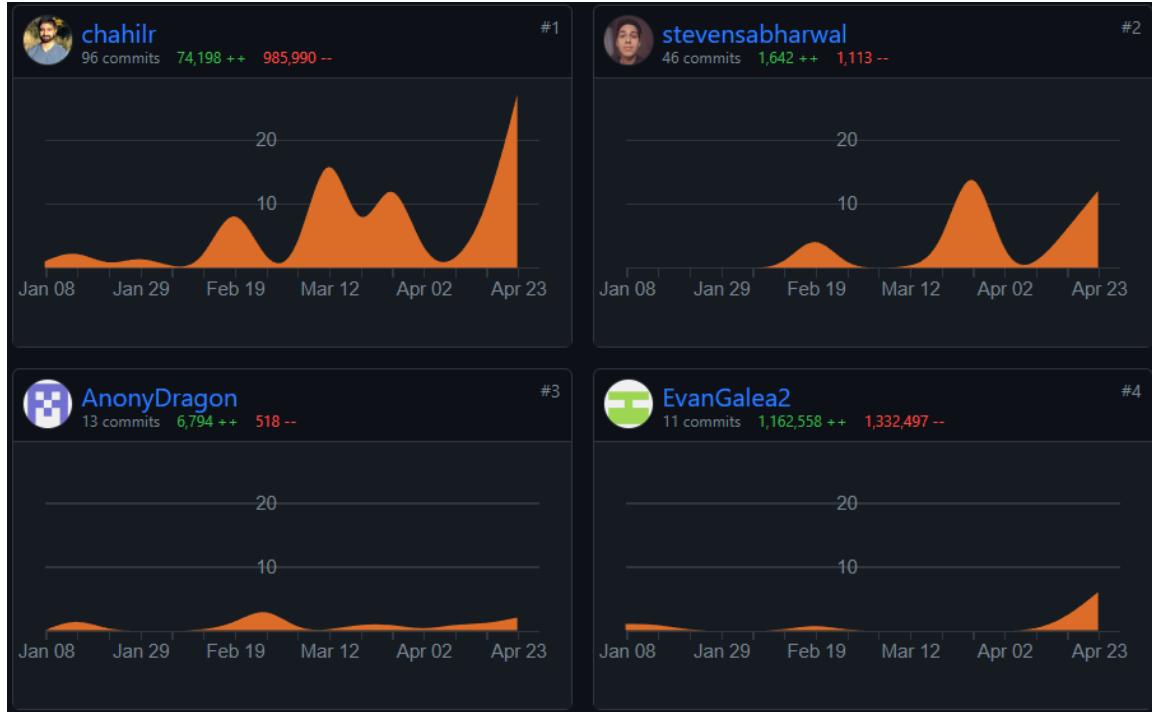


## Testing:

Throughout the development each component was tested as they were developed however, we failed to specify the tests and document them. This can lead to each component not being fully tested since some possible inputs or actions could have been overlooked. Near the end we made some automated tests using Jest to test react components and other things every time there is a push to the Gib Hub main branch. This allows us to be sure that the main branch is working correctly after any update has been made. This is a good extra layer of testing however, there should have been more clearly defined unit tests made for each component. For example there was some testing done in the first sprint on the database functions (The test document can be found here: [Link](#))

<https://github.com/chahilr/COSC-4P02-Project/blob/main/Database%20Work%20and%20Testing.pdf>) which shows how they were tested. They could have been tested more but since this was nothing the user would use directly, we just needed to make sure that they functioned as expected. Then as we developed the site each time someone added something they tested without clearly defining the test. This was not a good idea since there is no way to check if they were fully tested and how thoroughly each component was tested. Overall, the informal testing we have done did work to make the website but there is a good chance that some bugs were missed that could have been avoided with better-defined testing.

## Git Hub Contributions:





Number of commits did not fully signify that amount of work someone did since, for example Yannick De Caluwe (AnonyDragon) only has 13 commits but did the database, all manage admins and authentication. The low number of commits is because most changes were done in a commit or two. For example, the data base only is a single commit but was a good amount of work. Also, lots of times the commits would be on a branch which gets outdated and instead of trying to update it a new up to date branch was made with one commit containing all the changes from before. This is like others so please consider the work shown in this document and the summery of who did what on the next page.

To see the commits of a specific person, check the links below:

- Steven Sabharwal (stevensabharwal):
  - <https://github.com/chahilr/COSC-4P02-Project/commits?author=stevensabharwal>
- Reet Chahil (chahilr):
  - <https://github.com/chahilr/COSC-4P02-Project/commits?author=chahilr>
- Yannick De Caluwe (AnonyDragon):
  - <https://github.com/chahilr/COSC-4P02-Project/commits?author=AnonyDragon>
- Evan Galea (EvanGalea2):
  - <https://github.com/chahilr/COSC-4P02-Project/commits?author=EvanGalea2>
- Arshdeep (arshdeep42)
  - <https://github.com/chahilr/COSC-4P02-Project/commits?author=arshdeep42>
- Henry Tu (Henry-Tu):
  - <https://github.com/chahilr/COSC-4P02-Project/commits?author=Henry-Tu>
- FahadUmair (FahadUmair):
  - <https://github.com/chahilr/COSC-4P02-Project/commits?author=FahadUmair>
- George Barakat (gebt2000):
  - <https://github.com/chahilr/COSC-4P02-Project/commits?author=gebt2000>

## Video Discussion/Demonstration

Here is a video where we discussing the project and it's features:

[https://drive.google.com/file/d/1wXKE8zTnJknuOQ9PyoQOVTRo75UIrJd/view?usp=share\\_link](https://drive.google.com/file/d/1wXKE8zTnJknuOQ9PyoQOVTRo75UIrJd/view?usp=share_link)

## Summary of Key Tasks

- ❖ Figma designs
  - Reet, George, Henry, and Arshdeep
- ❖ Firebase setup
  - Yannick and Fahad
- ❖ Firestore data modelling and query construction (functions for adding/editing/reading artifact's data)
  - Yannick
- ❖ Page Routing
  - Evan
- ❖ React JS front-end development.
  - Steven, Evan, and Reet
- ❖ Login, landing page CSS
  - George
- ❖ Mock data generation and addition to Firestore.
  - Yannick
- ❖ Authentication
  - Yannick
- ❖ Manage admins pages (front end still has some fixes needed).
  - Yannick
- ❖ Timeline and artifact overview artifact data population (pull data from the database and displaying it)
  - Reet
- ❖ Artifact Searching
  - Reet
- ❖ Mobile css of non admin pages
  - Steven
  - Reet
- ❖ Add Artifacts.
  - Fahad
  - Evan
  - Henry
- ❖ Edit/List Artifacts
  - Fahad
- ❖ Testing
  - Evan, Arshdeep
- ❖ Final Report
  - George and Yannick
- ❖ GitHub Manager
  - Reet
- ❖ Product Manager
  - George
- ❖ Scrum Master
  - Steven