Testing Plan: M.S.I. Website

Version 1.0

CS 486c

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Untitled Developers

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1. Introduction

This document outlines the testing methods that were employed to verify functional completeness of the Martin-Springer Institute website capstone project of Spring 2016. The project is a *WordPress[1]* website which is available to access over the World Wide Web. Testing was a continuous process as style decisions were critiqued early and often throughout the development life cycle. This paper details the tests that were essential to deploying an operational system that fulfilled the requirements the *Untitled Developers* laid out for this project during the Fall 2015 semester.

2. Unit Testing

In this section we detail the various unit tests that will be used to measure the completeness of the functional capabilities of the system as outlined by our initial requirements design document. A unit test in this context is Referencing the design document, we have organized our functional requirements in the table below, along with the testing methods that we employed to verify functional completeness. Each requirement listed below was accepted as complete according to our 'capability demonstration' method of testing:

Functional Requirement[1]	Requirement Description[2]	Testing Method
2.1	The new site will retain all prior content...	Capability demonstration
2.2.1	Users will be able to access Exhibit, History and Resource content...	Capability demonstration
2.2.2	Users will be able to view an interactive timeline...	Capability demonstration
2.2.3	Users will be able to view	Capability demonstration

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[1] Each functional requirement is tagged according to the section number header that the requirement is associated with in the original requirements document

[2] Refer to Appendix A for complete requirements specification

	three unique maps...	
2.2.5	Users will be able to access M.S.I. contact info...	Capability demonstration
2.3.1	Users will be able to access content through modern web browsers...	Capability demonstration
2.3.2	The interface will be responsive to varying screen sizes...	Capability demonstration

2.1 Capability Demonstration

The site will primarily be tested and validated by an expert user, namely the client of the original web system. Our project involved a massive overhaul of the 'look and feel' of the site which involved changing a lot of subjective quality factors. This motivated our need for a highly-focused capability demonstration for our client. The capability demonstration is composed of the following steps:

1. Navigate to the home page of our website on one display monitor

2. Navigate to the home page of the original website on another display monitor

3. Using an exhaustive list of all unique page URLs, verify that each required page exists and includes all required content

This review is the final acceptance test before re-routing the current **bedzinexhibit.org** domain name to our new system.

3. Integration Testing

Our system has taken the *evolving prototype* approach to software system development and integration testing has been occurring throughout the software development life cycle. Due to the web environment, all components must conform to HTTP format standards. Additionally, due to WordPress architectural constraints, heterogeneous components must be carefully integrated according to the WordPress core. The development team has treated heterogenous-component integration as a top priority and has integrated style and functional components into a staging level (Pantheon) server to ensure a smooth transition onto our production server.

The final integration test was ensuring our Pantheon WordPress theme and SQL database files could be migrated to the final production server maintained by a third party hosting service[3]. We contacted the support team at *ReclaimHosting* to ensure that our new files could be integrated into their system. This testing was not performed until the week of the expected delivery date.

4. Usability Testing

The usability of the system will be measured according to the quality of the overall user interface. This will be tested based on a few questions:

- Does the new implementation deliver resources faster (more efficiently) than the previous solution?
- Does the web page layout respond dynamically to differing screen sizes and dimensions?
- Are the font sizes and colors appropriate for the intended audience?

Beyond these questions, we also need to address the the configurability of the WordPress interface. As a non-technical end-user, our client will need to be able to modify and update the content on the website for its entire life cycle. On site training will be included in our deployment process to ensure that our client is confident in his ability to maintain the system after the development team has dispersed[3].

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[3] See Appendix B: User Guide

5. References

[1] - https://codex.wordpress.org/

[2] - https://reclaimhosting.com/

Appendix A - Functional Requirements

Functional Requirements

2.1 - Historical Constancy

The purpose of the website is to be a supplement to the history and stories of

the exhibit Through the Eyes of Youth: Life and Death in the Bedzin Ghetto.

The website will include all stories, terms and definitions currently found on

the site . It will also include new content.

2.2 - Front End User Interactions

    2.2.1 - Users will be able to access Exhibit, History, and Resource website

    directories.

    2.2.2 - Users will be able to view an interactive timeline of World War II

    2.2.3 - Users will be able to view three unique, interactive maps detailing

    events surrounding the town of Bedzin

    2.2.4 - Users will be able to access educational materials related to the exhibit

    2.2.5 - Users will be able to access Martin-Springer Institute contact

    information

2.3 - User Interface Specifications

    2.3.1 - Users from around the world will be able to access and website through

    modern web browsers

    (Chrome, Firefox, Safari, Internet Explorer and Microsoft Edge)

    2.3.2 - The website interface will be responsive to mobile devices and

    reformat itself accordingly

2.3.3 - The website will be feature minimalistic like most modern websites

2.3.4 - The website will follow good placement concepts so the objects are

aligned currently so it can appeal to the website.

2.3.5- The website will feature intuitive animations to sort of bring life to it

when the user is navigating around it

Appendix B - User Guide

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1. Logging In

The following steps are imported directly from the previous documentation as the new site is

hosted on the same server:

1 Go to "reclaimhosting.com"

2 Click on "Client Area Login"

Take Control of your Digital Identity

Reclaim Hosting provides educators and institutions with an easy way to offer their students domains and web hosting that they own and control.

3 Log-in with this information:

User name:
melissa.cohen@nau.edu

Password:
Ralph&Doris2000
(this is case sensitive)

If you are experiencing problems logging in try restarting your browser.
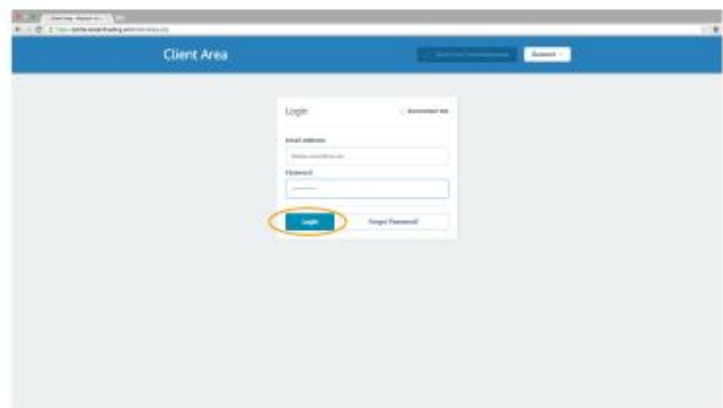
4 Click on "cPanel"
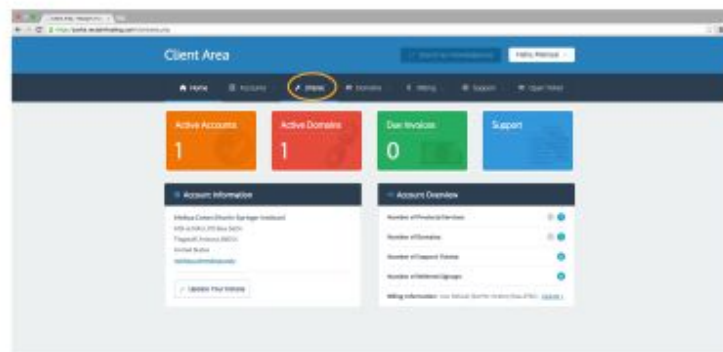
5 Click on "Bedzin Exhibit"

6 Click on:
"Bedzinexhibit.org/wp-admin"
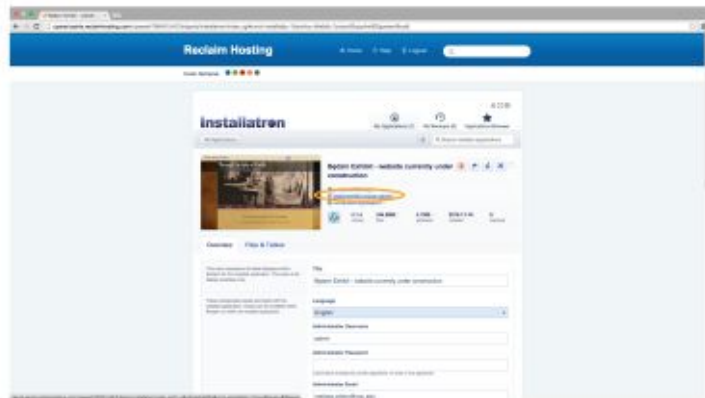
At this point, you are now accessing the *dashboard* and have full control over modifying the content of the site.
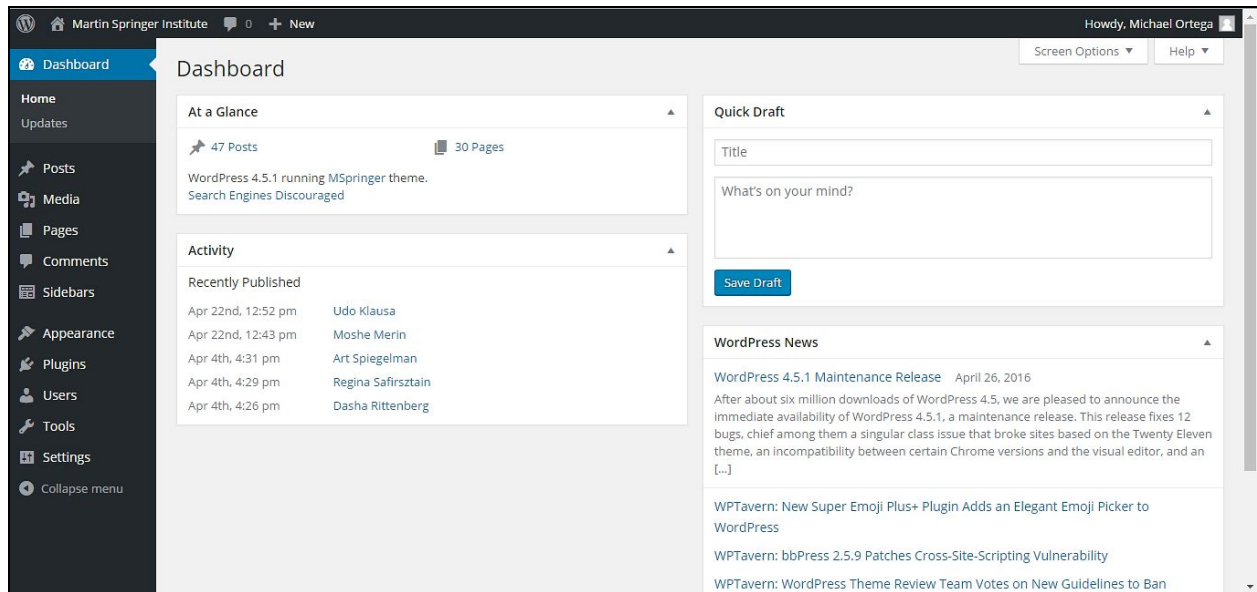
1. Editing Content

Most pages on the site may be modified directly from the WordPress dashboard. First, we will cover what can not be directly modified by the dashboard:

- The home page
- The header image
- The footer information
- The glossary

These pages make extensive use of highly modified code that is not stable with the WordPress dashboard configuration.

There are two types of pages which can be modified from the dashboard directly: *Pages* and *Posts.*

Each page on the website is classified as a *Page* type or a *Post* type. To view a complete listing of pages or posts, click on the appropriate menu item on the left, as seen below:

Difference Between a Post and a Page Type?

Pages are those that can be accessed from one of the two navigational bars: the top and side navbars seen below.

All *Pages* on the website that can not be found within one of these navigation menus belongs to the *Post* category. All new *Post* types that are added to the website will automatically be included in the glossary listing on the *Glossary* page.

1. Uploading Media

To upload new images or educational resources such as worksheets in .doc or .pdf format, select the *Media* button on the left hand side of the dashboard.
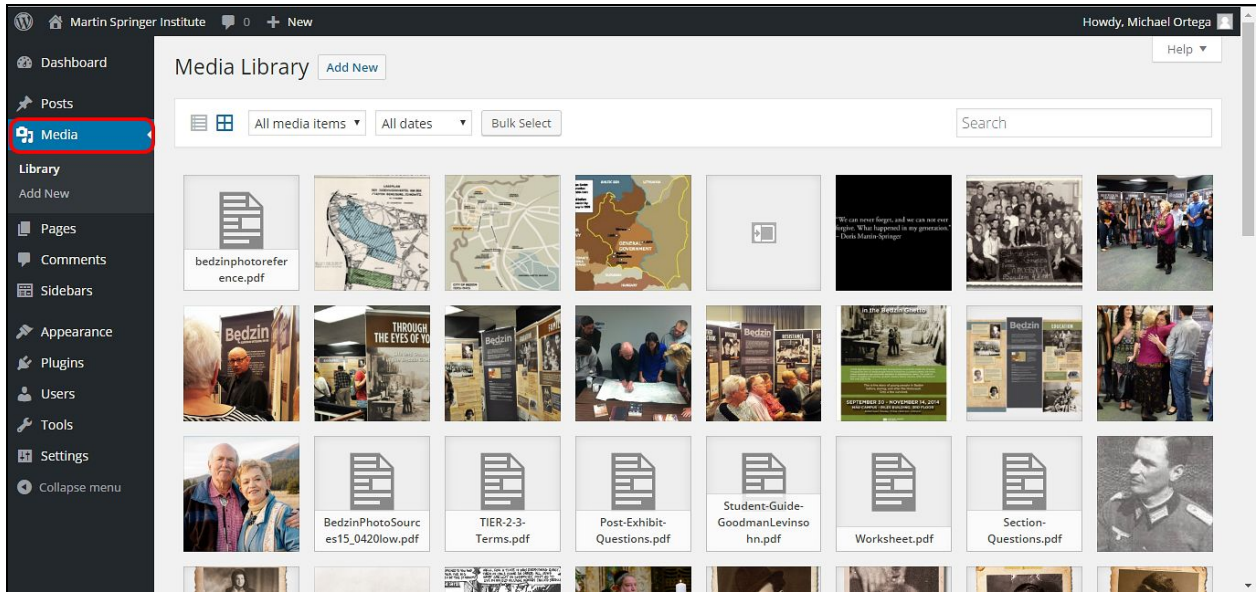
On the page that follows, select the 'Add New' button to search for the files on your local computer that you would like to upload to the website. With your new media uploaded, a URL will be generated for you to use to place the media where you want it on the site.
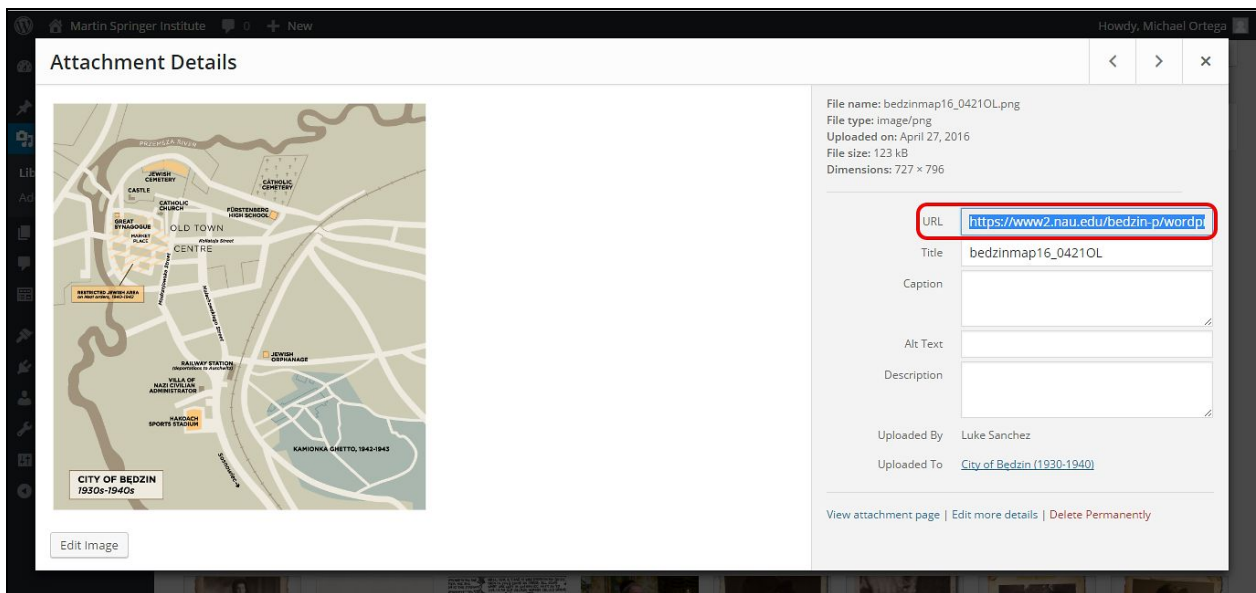
*New uploads are given a unique URL as outlined above*

1. Creating Hyperlinks

Hyperlinks can be added to any page/post. Once you have the URL to the media that you want to embed in a page or post, highlight the text that you would like to turn into a hyperlink and click the hyperlink button(1) seen below. Additional configuration can be managed by clicking on the gear icon(2) that pops up after clicking the hyperlink button.
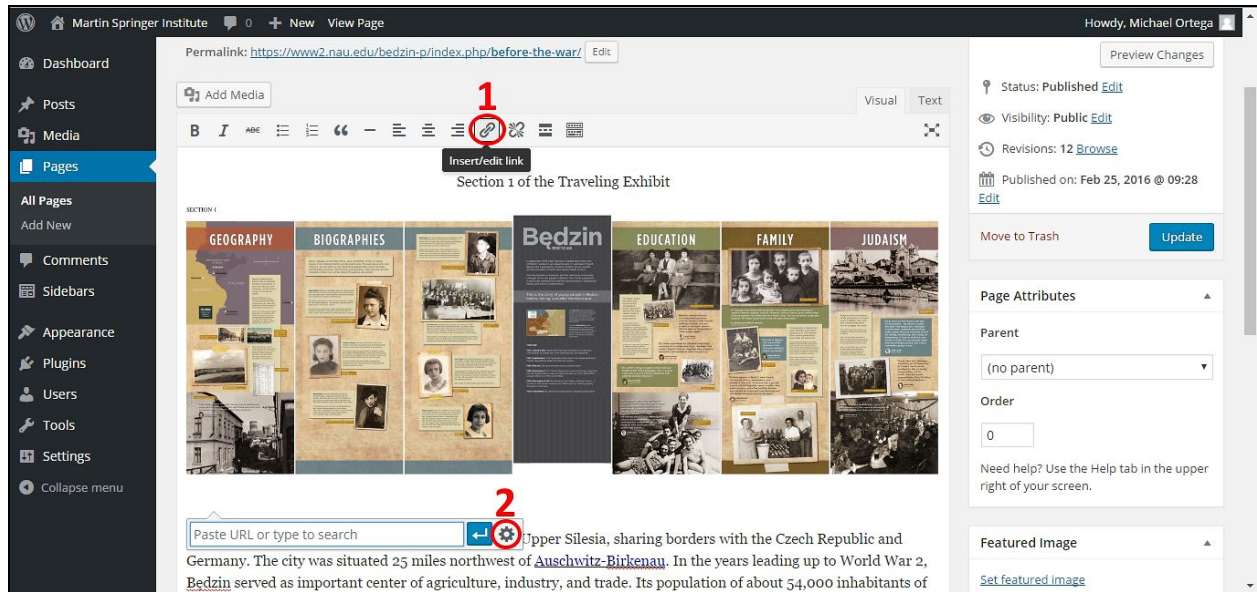
1. Creating New Posts

The WordPress dashboard supports two types of posts: *Glossary Items* and *People*. To add new posts to the site, select the 'Add New Post' menu item on the left hand side of the dashboard. You should now see the dashboard to add new posts to the website.
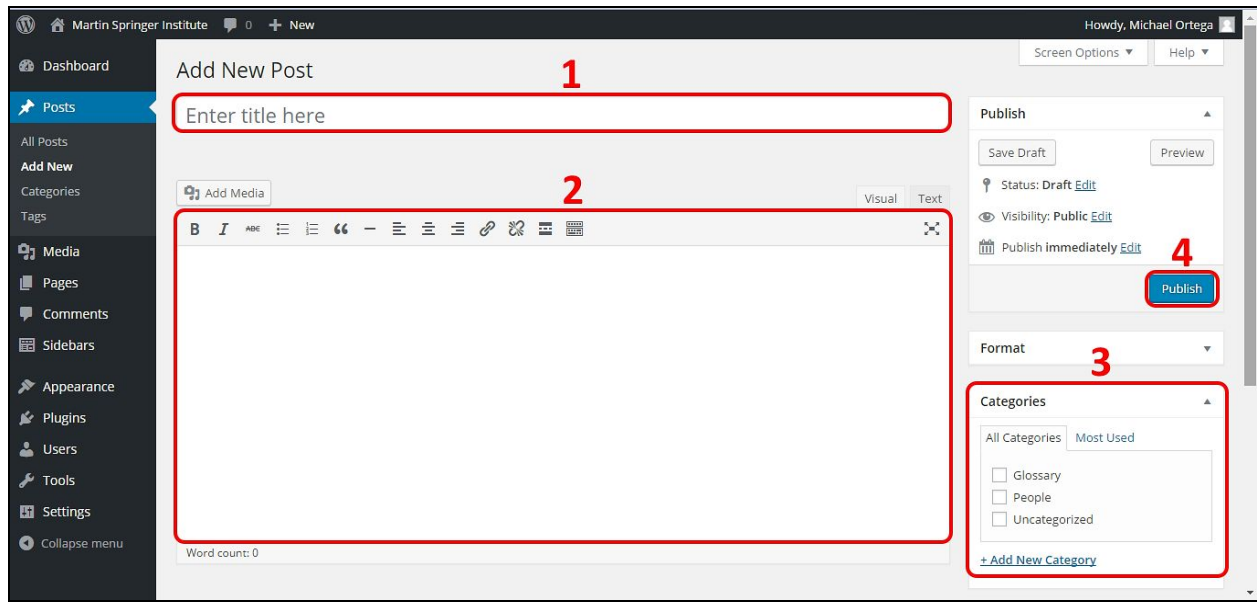
Here are the recommended order of operations to follow when adding a new post to the site:

1. Where you specify what the Title of the post is called

2. In this content box you may add photos, text and hyperlinks. The toolbar below the 'Add Media' button can be used to format content that will appear on the post.

3. IMPORTANT: Select the type of category this post is: *Glossary* or *People*. Depending on the category that is selected, this post will be automatically assigned a spot on the glossary page lists.

4. Publish! When you are ready to update the site with your new post, select the publish button. The *Preview* button can be used to view what the post will look like on the site before publishing.

1. Editing the Maps

The maps can be found inside of your Google drive. When you enter your Google drive the maps should appear as files with the actual maps as thumbnails. Double click the map you wish to edit and the file will be opened in editing mode. What you should see is the picture below.

This is the editor mode for the map. From here you can do things like: reorganize the legend, add new items to the map, rename items, add descriptions to items.
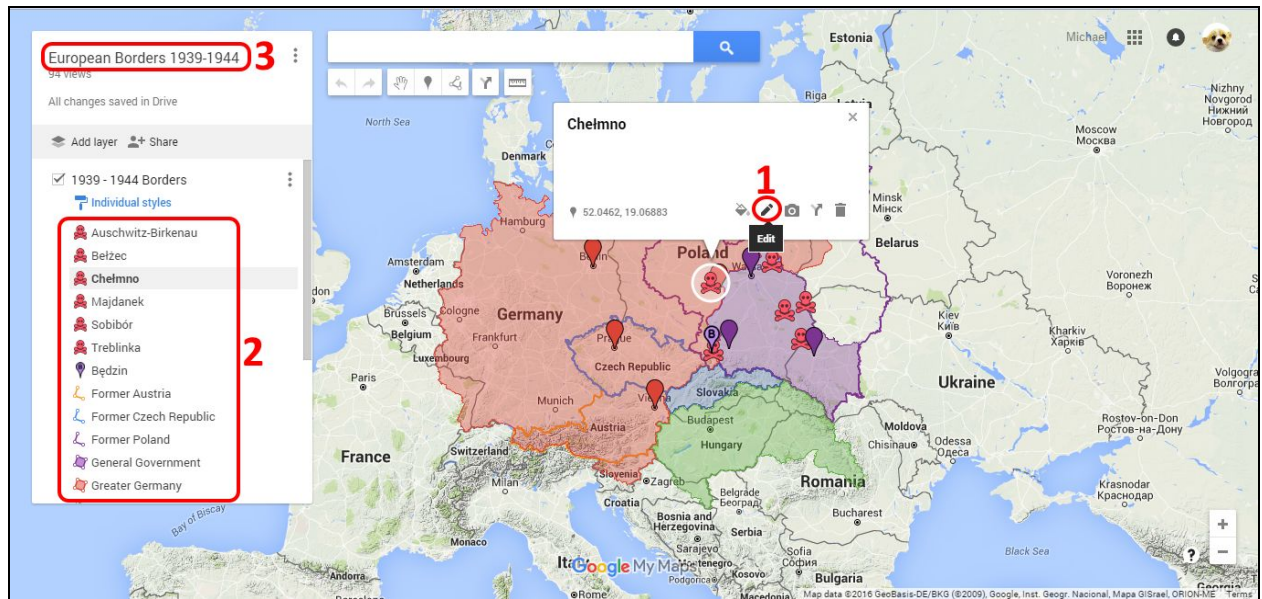
1. Edit Names or Descriptions of Items: First click on item you wish to change to select it. This is demonstrated in the above picture and this is what you should expect to see: the icon name and a small bar of icons to edit. Click on the small icon that resembles a pencil. This is the edit option. From here you will be able to change the name and description of the item and save it.

1. Rearrange the Order of Items in the Legend: Click and hold on the name of the icon in the legend and move it up or down the list, releasing it when it is in the desired position.

1. Change the Name of the Map Itself: Click on the name of the map in the upper left corner. In this example, you would click on the text "European Borders 1939-1944". This will open an edit display in which you can change the name of the map, and add a description if you want.

2. Add a New Marker or a Line to the Map: Add one or the other by clicking on their icons under the search bar at the top. Once you have selected which one you want to add to the map, you add them by clicking on the map and giving them a name and description.

IMPORTANT WHEN CREATING LINES

Once you are finished you complete the line by *clicking on the last point you have placed*. Also, if you are creating a polygon you must finish the polygon by *clicking on the first point placed*. Polygons cannot have overlapping lines within themselves and are limited to around a thousand points per polygon. If you exceed this limit then there is a chance that Google Maps will crash and delete the polygon. It is easy to exceed this limit if you are trying to create borders.

In this particular example, I have highlighted that when editing you can also *style* how something looks on the map. In the case of lines, you can make the line thicker and change the color. These help make the line more visible for the viewers. For polygons, you can change the transparency, the border width, and the color. Now, for markers along with changing their color you can also add your own custom shapes that you can either choose from a set of provided icons or upload your own image.