

# Roméo Dallaire Child Soldiers Initiative: Country Reports

Final Project Report 2017

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## Project Summary

The project is to develop an API that allows users to view and create a country report. It is developed using WordPress and WordPress Rest API using Ajax. The purpose of this project is to allow users view the reports electronically and manage them, instead of using paper copies of the report. This allows easier access to the report for the users in the field and keeping the reports up-to-date.

## Description

The project relies on two parts that work together to get the desired outcome. The WordPress part, which acts as the administrative panel for the API, the admin can delete, publish and update country reports. The other part is the REST API that displays the report on a web page and allows users to create new country reports. It has the GET and POST HTTP requests. DELETE and EDIT requests can be performed through the WordPress admin panel, or can be added in the future if needed.

## Workflow

### **User:**

Users can use the API to view the country reports that are published by clicking the report title from the sidebar. They also can click on “Create a New Report” to display a page with a WYSIWYG text editor (TinyMce), and they can create a new report through it. Once the user submit the report through that page, it will be created as a new “Post” in the WordPress panel with the status of “draft”.

## Admin:

An admin user can have access to the main WordPress panel, and from there they have full control that gives them the ability of creating, deleting, updating reports. They also review the country reports and change the status to “publish” to publish the report.

## Postman

Postman is a REST client platform that helps with the API development. It helps by testing the HTTPS requests such as GET, POST, PUT, DELETE etc.

## User Manual

Create a new report through WordPress admin panel

1. Go to the wordpress site: <http://dev-countryreportapp.pantheonsite.io/wp-admin/>
2. Login to the wordpress site

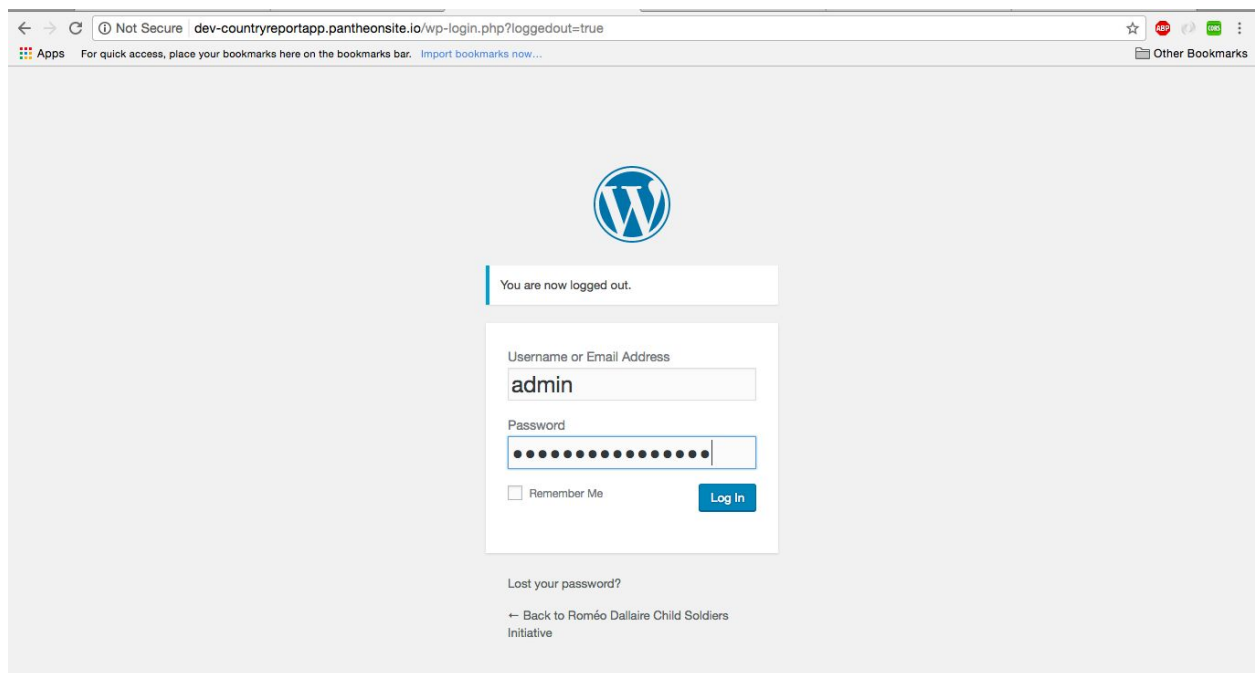


Figure 1.

### 3. Click on “Posts” -> “Add New”

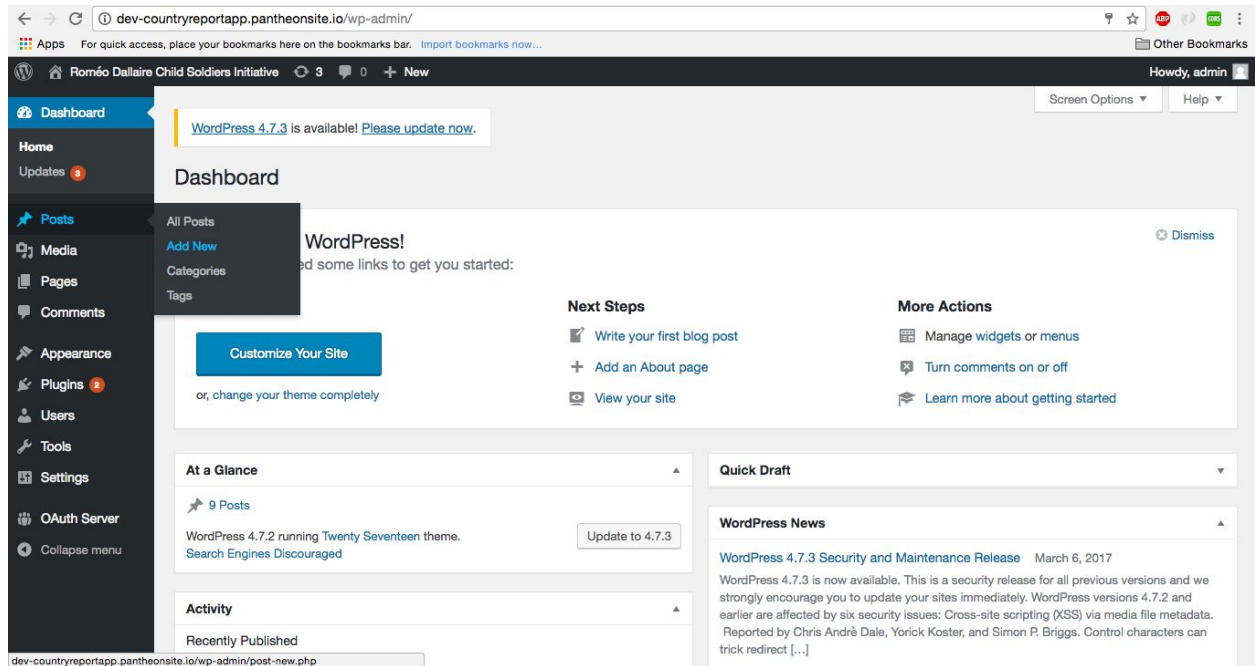


Figure 2.

### 4. Enter a title and text for the body

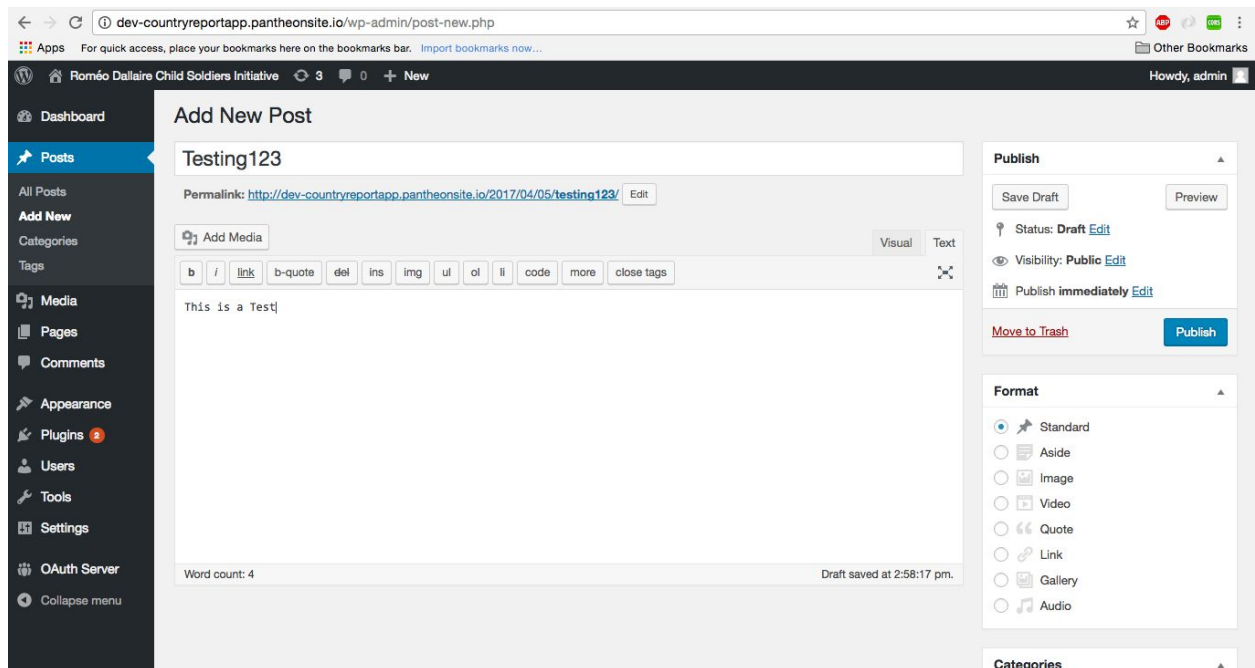


Figure 3.

5. Click “Publish” on the right hand side of the page

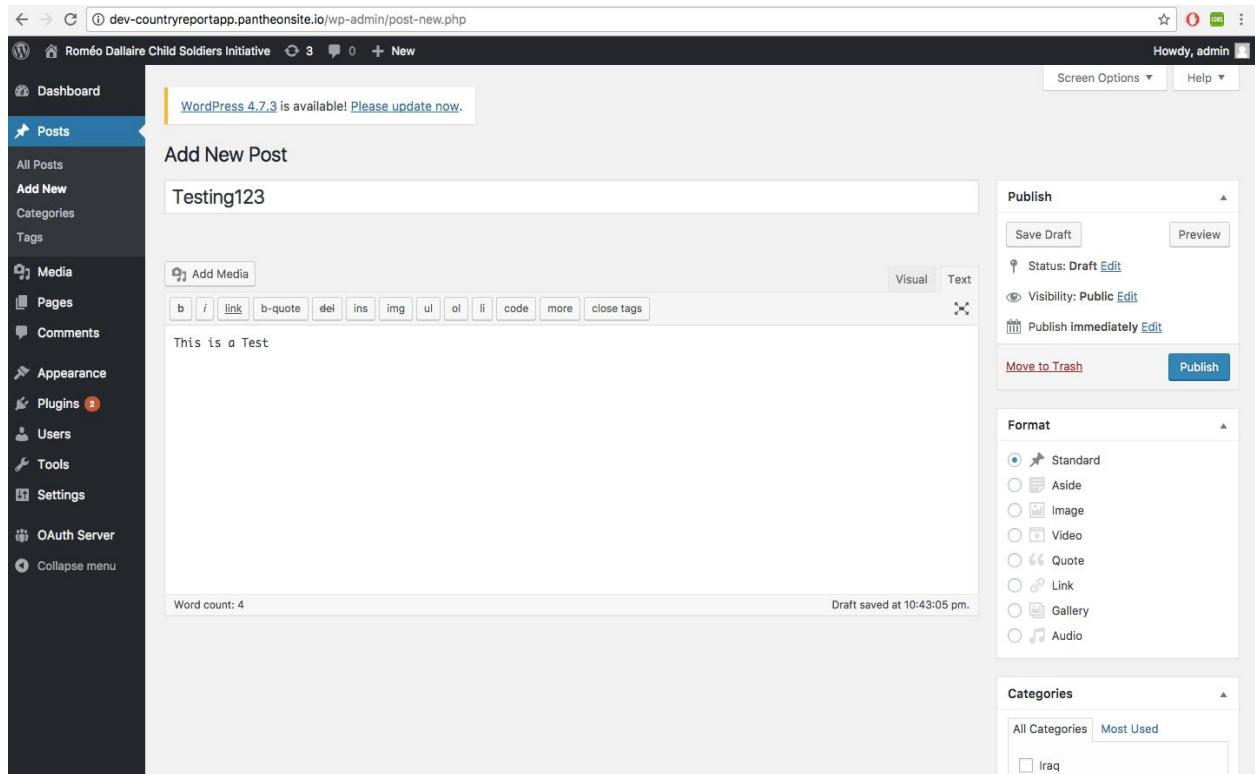


Figure 4.

6. The post is now visible from both the WordPress and on the front-end site

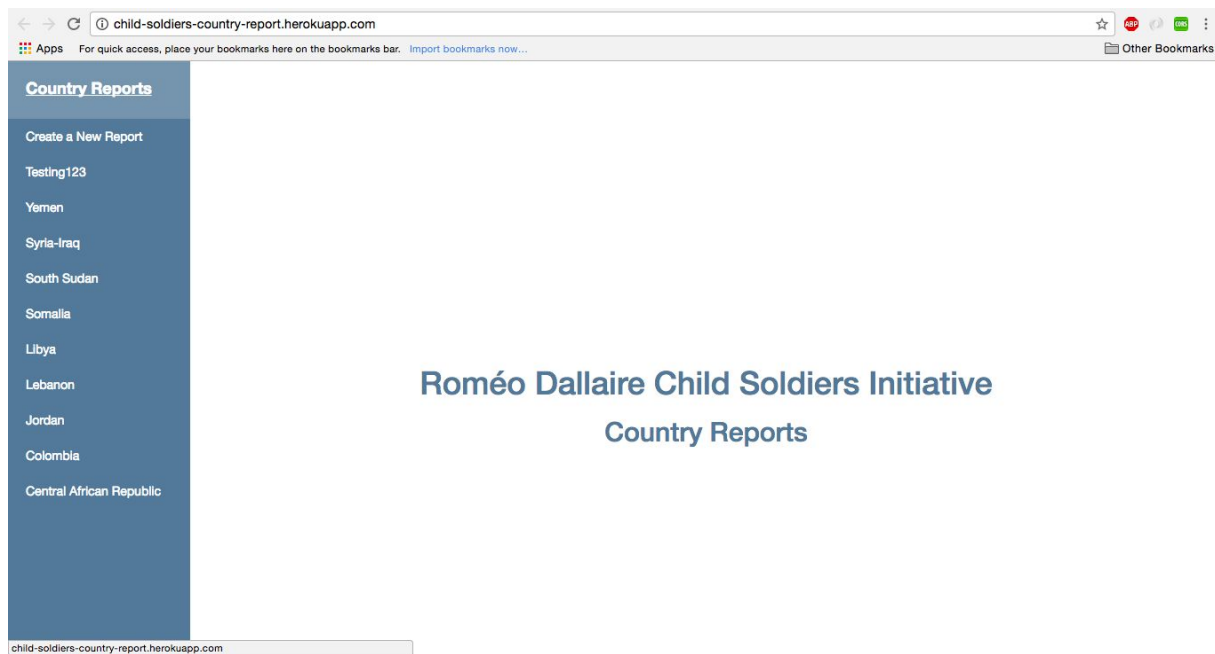


Figure 5

Create a new report through the API

1. Go to the API URL (make sure it is **http**):

<http://child-soldiers-country-report.herokuapp.com/>

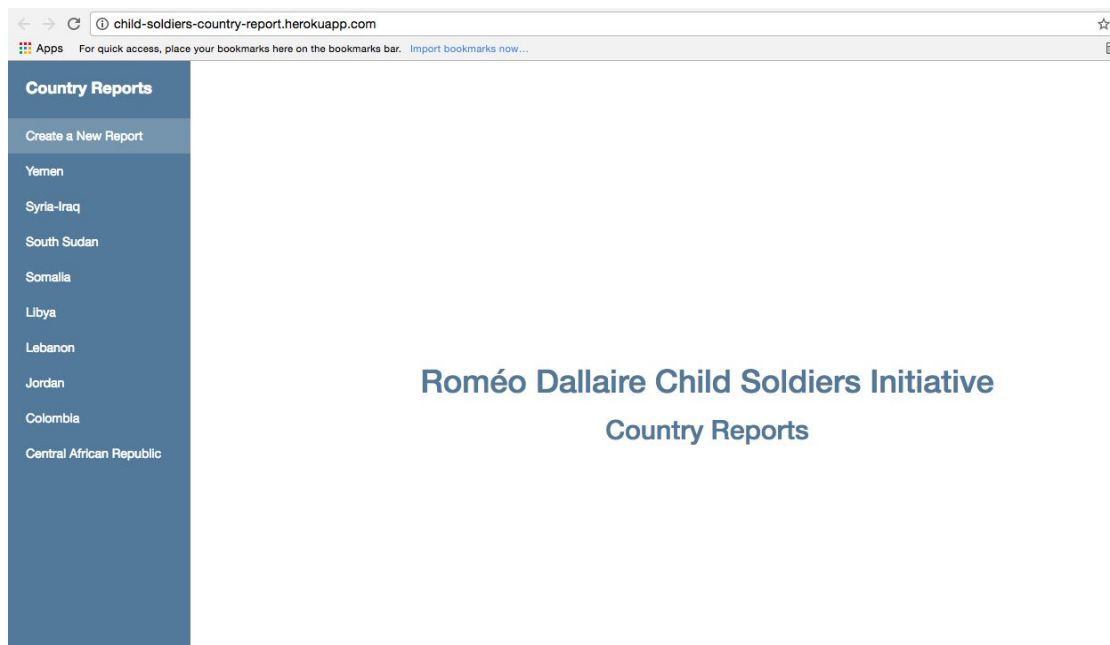


Figure 6.

2. Click on “Create a New Report” located on the sidebar.

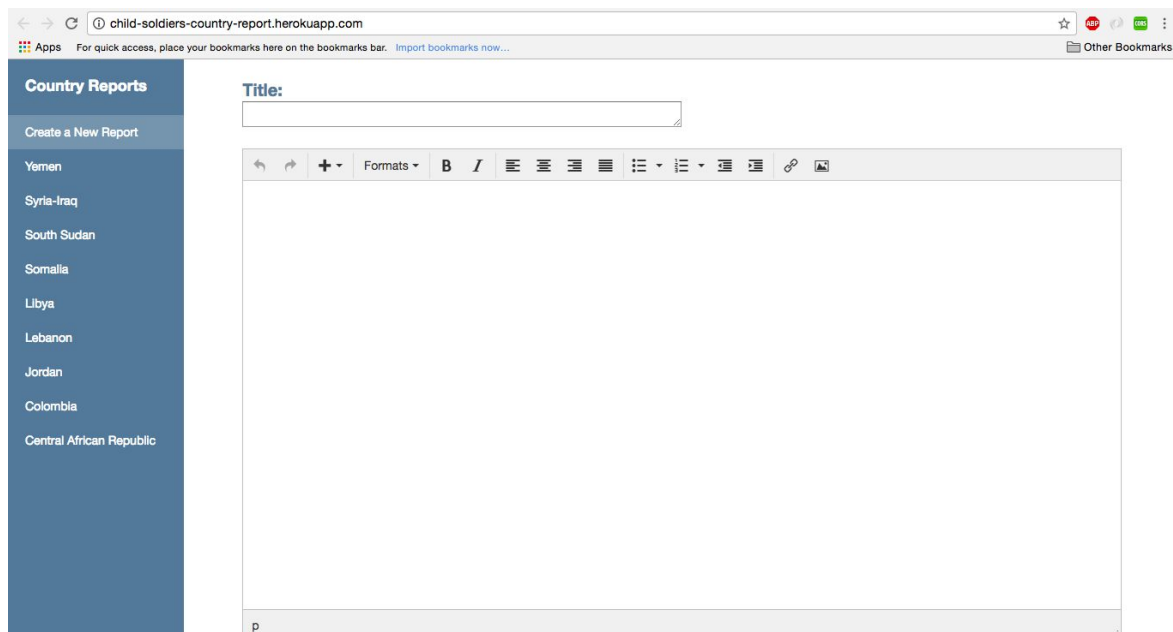


Figure 7.

3. Enter the title and text. You can change the style of the text here.

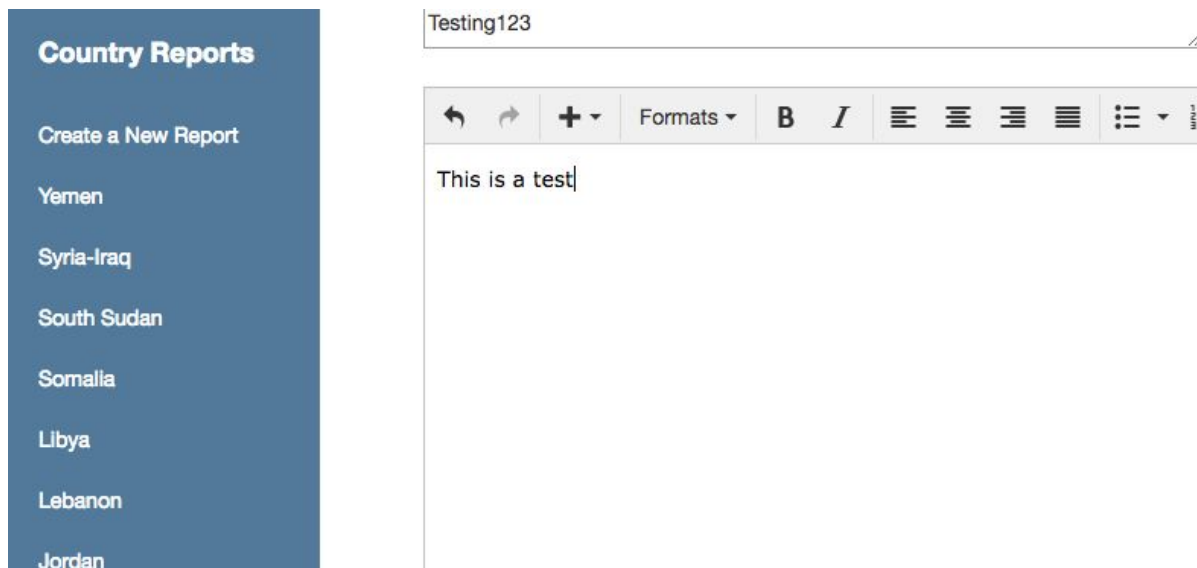


Figure 8.



4. Click the submit button and the report is now posted as a draft to the Wordpress site.

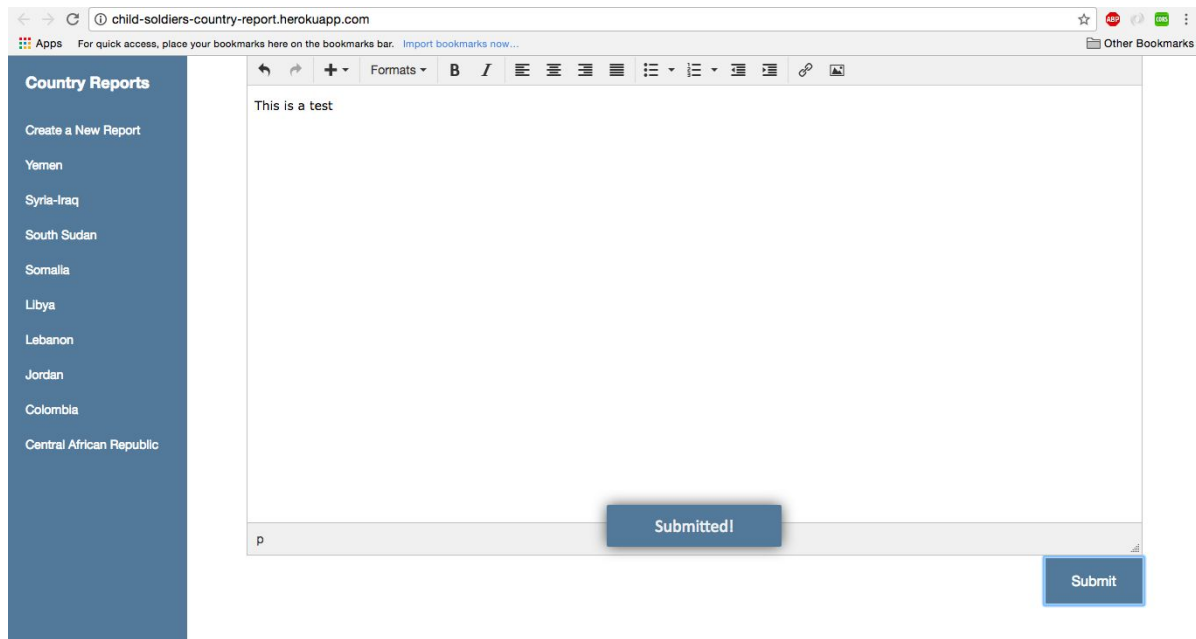


Figure 9.

5. The admin on the WordPress site can publish the draft. To do this, click on the title of the post and then click on “Publish” on the right side of the page.

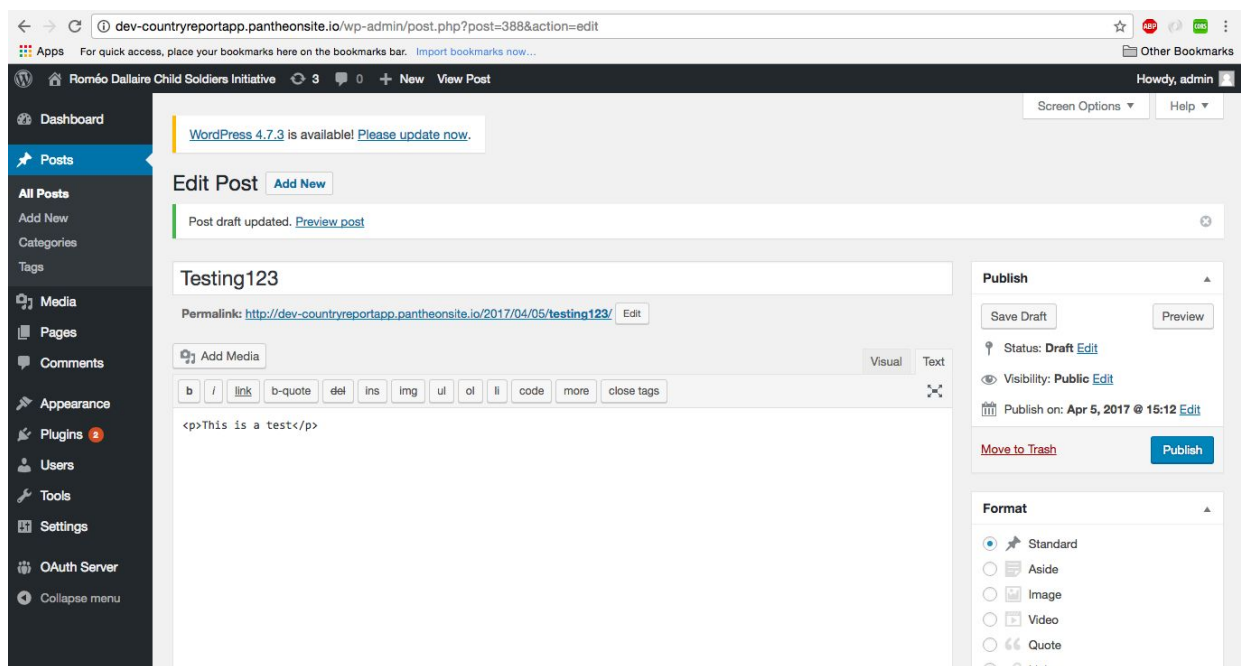


Figure 10.

## Outstanding Issues

Before the completion of the project, there were few issues the team found to be challenging. The team was unfamiliar with WordPress REST development, so the team spent some time learning the tools and using Postman for testing through the learning process. The team also had to learn OAuth 2.0 during the practice with postman, which was a constant issue throughout the development. OAuth needed to be integrated on the WordPress site and is used as the authentication for POST requests. After the training, the team was able to send a GET request to the WordPress site and present all the documents on the website the team has developed. However, the POST request required a handshake authentication through OAuth 2.0. So, the team needed to set up a Node.js server to handle the process, which required another training to get familiar with it. Finally, the project needed to be deployed on Heroku server that was given by the client. The team was unfamiliar with the Heroku deployment process, but then the team was able to fix the issue and the site was deployed successfully.

Other than the technical issues the team has faced, there was also some trouble setting up a meeting time that worked for all members. The team consisted of 6 people with varying years of study, so there was no common time that could satisfy everyone's schedule.

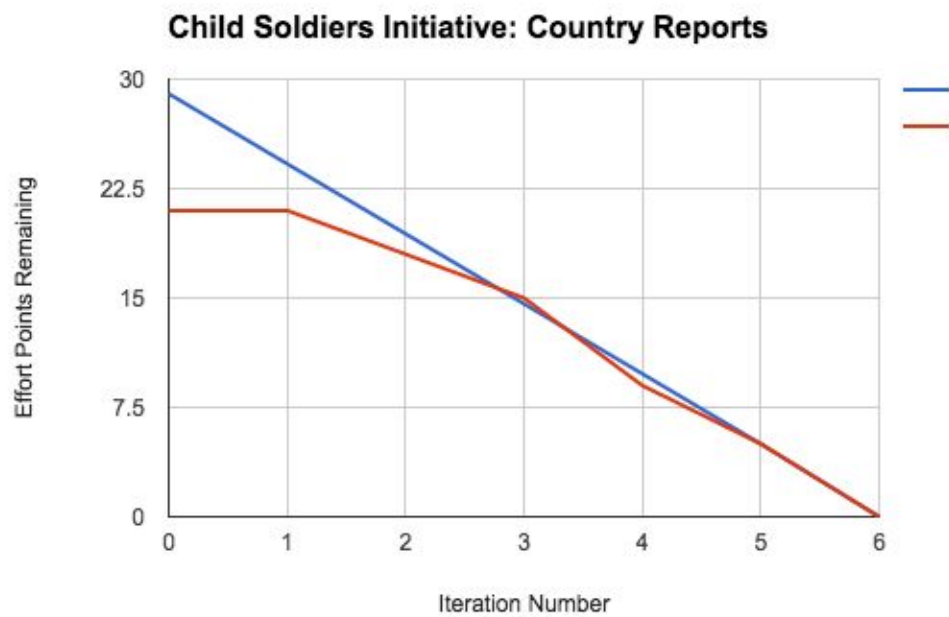
Currently, the site that is deployed on Heroku has https in the URL by default and the WordPress site URL does not. This raises a "Mixed Content" error that does not allow the reports to be displayed.

For future enhancement and more secure website, it is recommended to install SSL on the server where the WordPress is hosted. It can be done through the admin panel where the WordPress site is hosted (requires subscription). This will enable the API to work on *https* instead of *http*.

## List of Completed Tasks

- POSTMAN
  - Initial Setup
  - Authorization
    - Basic Auth
    - OAuth 2.0 and request tokens
  - Perform successful GET and POST requests
  - Install Server-Client Plugin
- API Page
  - Setup basic page showing the endpoints to demonstrate the functionality of the GET request.
  - Setup AJAX
    - GET request
    - POST request
  - User Interface
    - Design layout (Bootstrap).
    - Create sidebar for navigation.
    - Hide and display content correctly on command.
    - Position everything according to the design of the main page.
  - Creating a new country report
    - Create WYSIWYG editor
    - Implement with AJAX
- Wordpress REST integration
  - Implement with OAuth
  - Get content of text editor in UI
    - Add to WP REST API functionality
  - Efficiently get data from WP and send to API page

## Burndown Chart



# System Documentation

## Heroku Server

The site has been deployed to Heroku and can be reached through this link: <http://child-soldiers-country-report.herokuapp.com/>. The deployment process is manual, when new changes are pushed to GitHub, users should go to <https://dashboard.heroku.com/apps/child-soldiers-country-report/deploy/github> and click “Deploy Branch”.

## Ajax

Asynchronous JavaScript and XML is used for the main logic behind the HTTP requests (POST and GET). Bootstrap is also used along side Ajax for designing the webpage.

## Node.js

We use a minimal amount of express.js in index.js in order to create a temporary server to make the POST call to the WordPress API.

This link is a good resource to understand the functionality of Node.js and the logic behind it. [https://www.tutorialspoint.com/nodejs/nodejs\\_restful\\_api.htm](https://www.tutorialspoint.com/nodejs/nodejs_restful_api.htm)

## WordPress

We made use of the WordPress REST API for the country reports. The reports are stored on the WP back end as “posts”, we add unpublished posts by making a POST to the API, and we get the list of reports by making a GET request to the posts from the API.

Sign off

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Josh Boyter

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Bader Kanawati