

Software Testing for Voluntrax

UI Testing

Selenium based UI testing results:

```
Tue 27 May - 21:27 ~ /Documents/School/Spring25/SDP/tests/ui
@andrew python3 ui_testing_driver.py
--- UI TESTING FOR VOLUNTRAX.COM ---

[TEST][WEB TITLE] -- Status: PASSED
[TEST][LOGIN BUTTON] -- Status: PASSED
[TEST][SIGN IN] -- Status: PASSED
[TEST][ADD ORG NAVIGATION] -- Status: PASSED
[TEST][MANAGE USERS NAVIGATION] -- Status: PASSED
[TEST][STANDARD VIEW NAVIGATION] -- Status: PASSED
[TEST][MANAGE VOLUNTEER NAVIGATION] -- Status: PASSED
[TEST][MANAGE LOCATIONS NAVIGATION] -- Status: PASSED
[TEST][MANAGE QR CODE NAVIGATION] -- Status: PASSED
[TEST][HOURS REPORT NAVIGATION] -- Status: PASSED
[TEST][LOGOUT NAVIGATION] -- Status: PASSED
[TEST][ADD VOLUNTEER] -- Status: PASSED
[TEST][DELETE VOLUNTEER] -- Status: PASSED
[TEST][ADD LOCATION] -- Status: PASSED
[TEST][DELETE LOCATION] -- Status: PASSED

Time elapsed: 9.15 seconds.

Tue 27 May - 21:28 ~ /Documents/School/Spring25/SDP/tests/ui
@andrew |
```

The UI testing was done using a framework called Selenium. The tests were implemented using python. After importing the library, I could easily connect to our website and manipulate the frontend using code in order to test its functionality. The tests include navigation through the website, login/logout, volunteer adding/deletion and location adding/deletion. While these tests are not completely extensive, they can be easily extended to test more features of the website.

Unit Testing

PHP-Unit testing results:

```
root@code-and-conquer:/data/web/cac# ./vendor/bin/phpunit tests/VolunteerTest.php --verbose
Test environment initialized
PHPUnit 9.6.23 by Sebastian Bergmann and contributors.

Runtime:       PHP 7.4.3-4ubuntu2.29
Configuration: /data/web/cac/phpunit.xml

.....                                     6 / 6 (100%)

Time: 00:00.201, Memory: 6.00 MB

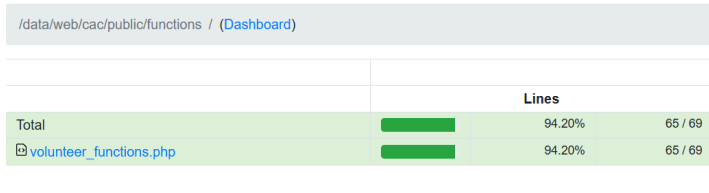
OK (6 tests, 45 assertions)
root@code-and-conquer:/data/web/cac#
```

The unit testing was done utilizing the existing PHP-Unit testing tools available as packages on linux. Once installed and configured on the server, we were able to create a simple test file that

runs a series of six tests. The tests include things like attempting to create records in the database, both formatted correctly and incorrectly, and making sure that the code handles things appropriately. There are a total of 45 assertions in the unit testing file, and currently all 45 are successful. (See screenshot above)

Code Coverage Testing

Code coverage test results from xdebug:



The code coverage testing was done leveraging the xdebug php module. We created a business functions file that simulates various system actions. The code and tests are reviewed by the xdebug plugin, and a score is given (see screenshot above.)
–Both the Code Coverage and Unit Tests are automated and run hourly, posting reports to a web accessible link.

Alpha Testing

Alpha testing results based on the required list of user stories:

An administrator can register their agency with the software and invite other employee users to the platform.

Organization Registration

Add New Organization

Organization Name *

AgencyTest

Maximum 32 characters

Description

Brief description of the organization

Contact Email

Organization contact email

Number of Registration Codes

3

These codes will be used by administrators to register for this organization

+ Add Organization

Registration Codes: AgencyTest

Organization 'AgencyTest' added successfully with 3 registration codes!

Generated Registration Codes:

FRNMHL76PG

VS82ZY5LNU

SE98W7IS04

These codes will expire in 30 days. Share them with organization administrators to register.

Organization Details

1 + Generate New Codes

Registration Codes

CODE	CREATED	EXPIRES
------	---------	---------

Create an Account

Join VolunTrax to manage your volunteering activities

First Name: Jane Last Name: Doe

Email address: Janedoe@work.com

Organization Code: provided code#

Enter the organization registration code provided to you

Password: *****

Password must be at least 8 characters long

Confirm Password: *****

[Create Account](#)

[Already have an account? Sign in](#)

The images above demonstrate the first two user stories of the requirements list for an agency administrator.

The first two photos represent being able to create/add a new organization, with then a satisfactory approval and message of the organization creation. For the third image, inviting the other employees/users to the platform, as this is accessible with the agency administrator sharing a unique registration code in order to be registered. Then “Jane Doe” as an employee is able to be associated with the agency, with the email and password. Once I signed up, I was notified that I can login with my associated agency company name.

A volunteer coordinator can register and also deactivate volunteers who are no longer active.

Add Volunteer [← Back to Volunteer](#)

First Name *: Jane Last Name *: Doed

Date of Birth: 01/01/2001 Email Address:

[Cancel](#) [Add Volunteer](#)

I was able to add a volunteer as a volunteer coordinator, with their provided personal information. And was given a success message when I added a volunteer.

Manage Volunteers [← Back to Dashboard](#)

Volunteer List [+ Add Volunteer](#)

NAME	EMAIL	DATE OF BIRTH	EMERGENCY CONTACTS	STATUS	ACTIONS
Jane Doe	jane@doe.com	Jan 2, 2003	0 contacts	Inactive	✉ 👁 🗑
Jane Doed	Not provided	Jan 1, 2001	0 contacts	Active	✉ 👁 🗑

Additionally, being able to deactivate a volunteer or go revert back to being an active volunteer.

A volunteer coordinator can add volunteer locations and also remove a location.

Manage Locations




Add New Location

Location Name

Maximum 32 characters

+ Add Location

Current Locations

NAME	STATUS	QR CODE	ACTIONS
AgencyTest	Active	✖ Not Created	  

I was able to add a new location, by going to the “Quick Actions” shortcut of the dashboard, as the volunteer coordinator. Being able to add a simple new location name and was given a success message, and if I need to also temporarily deactivate the location with the switch off icon, and or delete that location with the red trash can icon.

A volunteer coordinator can store emergency contact information of volunteers.

Add Emergency Contact

[← Back to Volunteer](#)

First Name *

Last Name *

Email Address

Phone Number *

Cancel

Add Emergency Contact

Going to access the “Manage Volunteers” section, and then clicking on the “emergency contact” text of that specified volunteer. Which then showcases the prompt message section to input the details of that emergency contact. And once I clicked the green button to add the new contact, I was given a message that it was added successfully.

A volunteer coordinator can export reports of volunteers for syncing with other systems.

Volunteer Hours Report

[← Back to Dashboard](#)

Filter Hours

Year	Month	Volunteer	Location	
2025	All Months	All Volunteers	AgencyTest	Apply Filters

Total Hours	Total Volunteers	Time Period
0	0	2025

Volunteer Hours

[Print](#) [Export CSV](#)

This is shown on the dashboard, to click on “View Hours Report”, where I am able to customize the parameters to be more specific of what to showcase, and I’m able to print and or export a CSV type of the volunteers.

A volunteer coordinator can generate a QR code to allow volunteers to sign into an associated event.

Location QR Code

Location Information

Name: AgencyTest

Status: Active

[Generate QR Code](#)

QR Code for Check-in/Check-out



Created: May 27, 2025 11:14 PM

URL: https://voluntrax.com/volunteer_checkin.php?code=3cd3d8c453e420da

[Print QR Code](#)

[Test Check-in](#)

Post this QR code at your volunteer location. Volunteers can scan it to check in and out of their shifts.

The QR code links to a mobile-friendly page that will allow volunteers to enter their email and record their volunteer hours.

As a volunteer coordinator, I was able to go to the “Manage Locations” section, where I was able to generate a specific QR code for the


agency I'm working with, of that location name. Which in this case was the same name as the agency. And I'm able to print out that pdf to show at a kiosk.

A volunteer coordinator can view a real time dashboard which syncs with stores volunteer data.

Dashboard

Welcome to your VolunTrax dashboard, Jane Jane !

Volunteers




9

Total registered volunteers

[→ View All Volunteers](#)


Currently Volunteering



1

Active volunteers right now

Hours (2025)



225.1

Total volunteer hours this year

[→ View Hours Report](#)

Currently Active Volunteers

VOLUNTEER	LOCATION	CHECK-IN TIME	DURATION SO FAR
<div><div>J</div><div>Jane Doed</div><div>janejane@work.com</div></div>	AgencyTest	11:22 PM	0h 4m

As the volunteer coordinator this is the first thing when I login to the website, I will see the real-time dashboard rolling and which active volunteers there are currently. As this showcases the number of volunteers, current volunteers, and total hours for the year.

A volunteer can use their camera to scan the QR code and check in/out of an event.

Volunteer Check-in/Check-out

EWU

AgencyTest

Your Email Address

Notes (Optional)

Any additional information

Check In/Out

If you have already checked in today, this will check you out.
You must be a registered volunteer to check in.
If you're having trouble, please contact the volunteer coordinator.

You have successfully checked out!

Volunteer Check-in/Check-out

EWU

AgencyTest

Successfully Checked In!

Hello, Jane Doed

Check-in time: 11:34 PM

Date: May 27, 2025

Remember to scan this QR code again when you leave to check out.

Check In/Out Another Volunteer

Volunteer Check-in/Check-out

EWU

AgencyTest

Successfully Checked Out!

Thank you, Jane Doed

Check-out time: 11:34 PM

Date: May 27, 2025

Duration: 0 hr 1 min

Thank you for volunteering with us!

Check In/Out Another Volunteer

Using the same QR code for that registered location, as provided. I was able to use my camera to detect the QR code to be redirected to the website to check-in/out. This could also be done with the website link for computer access too. Once I added my email address as a volunteer coordinator as an officially registered volunteer, I was able to check-in and check-out with that same site.