



Project Report

HEROES For Students Foundation

Charles Brown, Arick Hanna, Tom Sharp, Ed Sharp, William Sugihara

Team members

Table of Contents

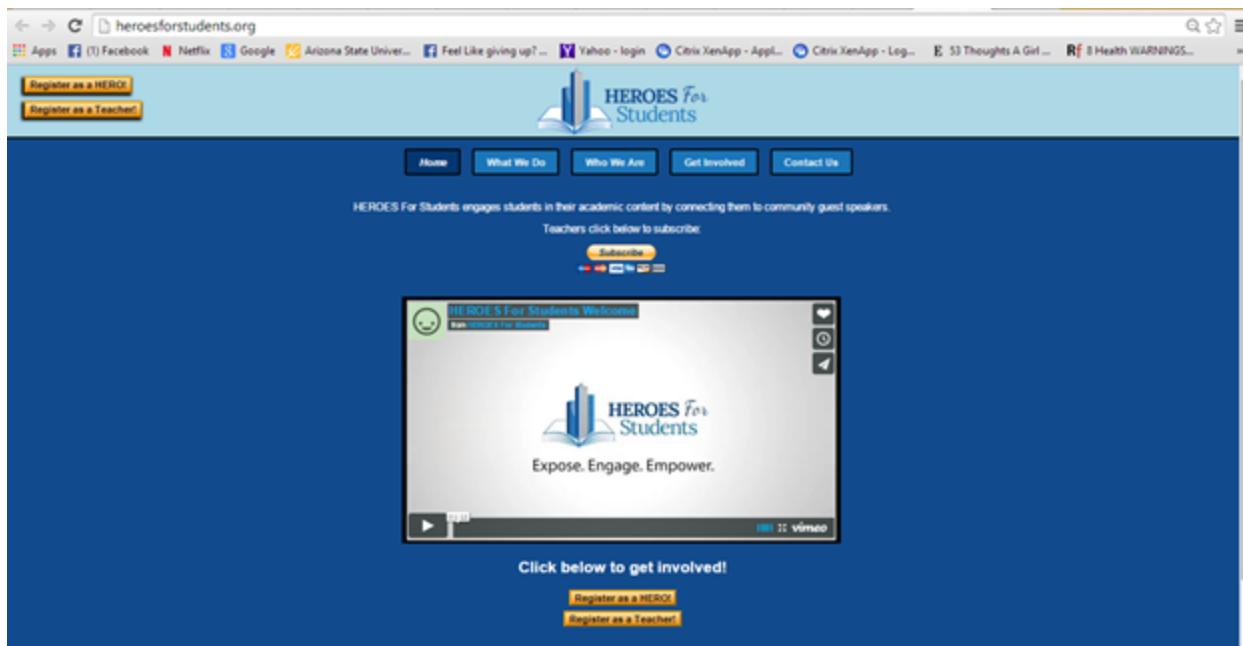
Cover.....	1
table of contents.....	2
Introduction.....	3
Website Design.....	4
Website Testing.....	10
Waffle IO.....	16
Final Website.....	18
GitHub.....	24
Conclusion.....	25

Introduction

HEROES for students was founded by Chris Reina and Richie Ressel as a non-profit foundation. HEROES operates as a standards-based classroom curriculum supplement and online platform for networking K-12 teachers to guest speakers from the community to apply students' academic content to the real world. Part of getting their foundation going was the creation of their web presence. This was done previously by ASU students working on their capstone project. The final product was successful in providing HEROES for students a web platform for teachers and community business leaders to connect. In order to move the foundation forward, Mr. Reina and Mr. Ressel decided their website needed a complete overhaul in terms of the layout and design. They were happy with the basic functionality and the backend they selected to store registered users information, but they wanted their website to have a modern look to it. After meeting with Mr. Reina we received a list of items to update or change on the HEROES for students website along with an initial due date of March 4th. The list included updating the look of the website to a more modern appearance, creating an animation that described what HEROES does in 30 seconds, and adding features such as slide shows, news feeds and improved content management. We then assigned priorities to the changes items and determined which items will be completed by March 4th. As we proceeded with the project we met with the client every two weeks prior to the milestone due dates to ensure the changes were aligned with their vision. The following is a detailed explanation as to what each milestone included for this project, and a brief description as to what items remain for a possible future project.

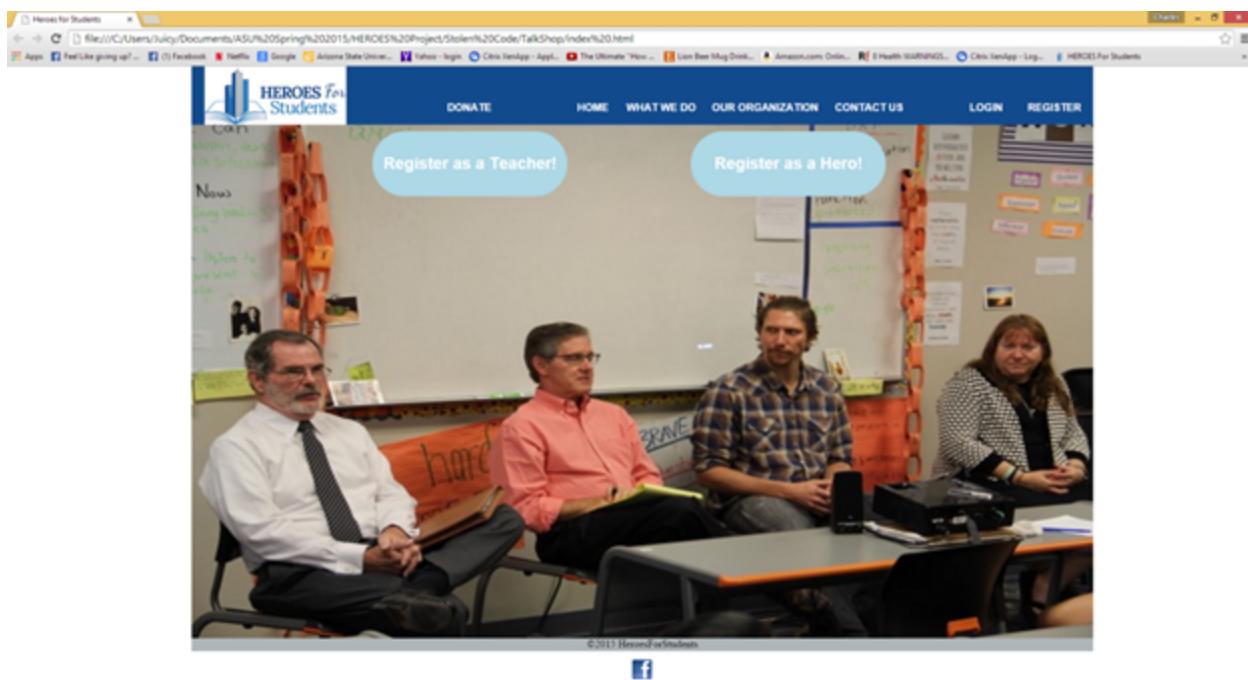
Website Design

After our team had its first meeting with the client we had a good idea of what was desired initially. Our client Chris wanted to make his website more aesthetically pleasing for users so that they would be more inclined to use their website. He compared the look he wanted to that of the “Teach For America” webpage so we had a good example to start from. Chris found the current state of the website to be boring and bland.



Initially there was already Java, php, html and css code working for the website. There were ‘include’ files but the problem was with the JQuery file. There was only one file and in that file were several functions that were being used for the HEROES site. The issue was that no one on our team had experience working with JQuery. Charles attempted to understand the code and how it drove the different aspects of the code for the website but it was taking too long in the amount of time that was given (spring semester at ASU). So the team discussed it and made a decision to start from the bottom up without using the JQuery code, although some of the original code was still implemented for the current site.

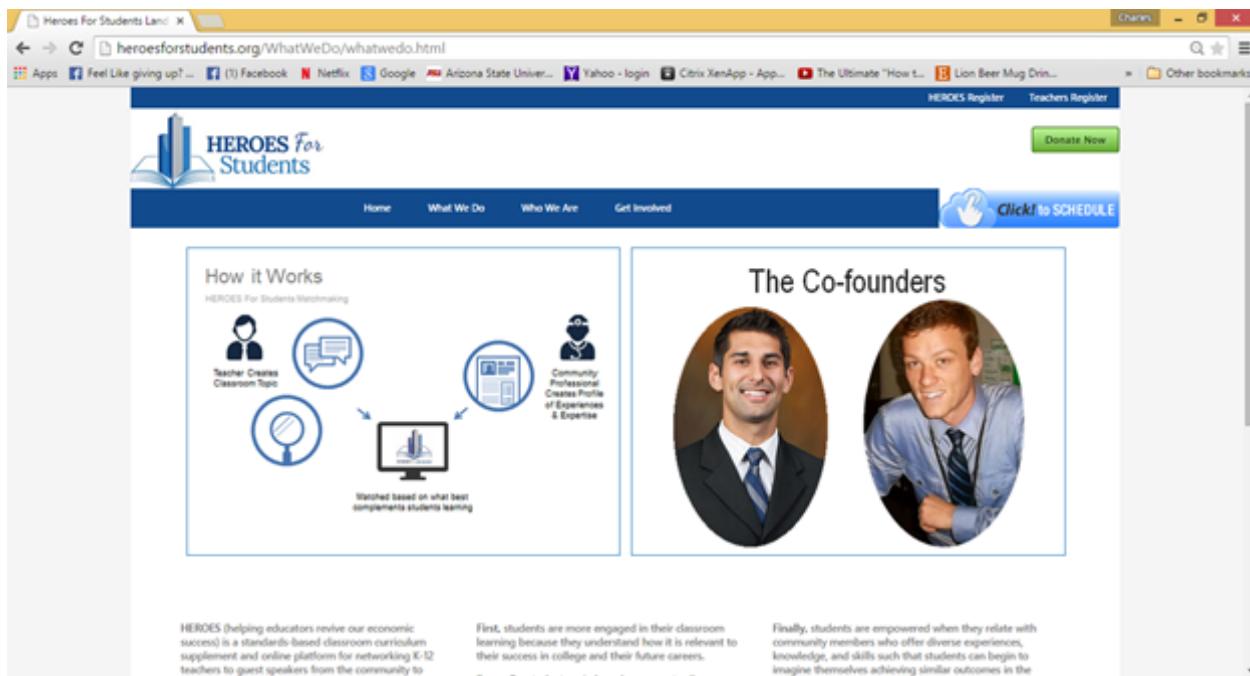
The first task was to redesign the home page and thus every page in the website. Every team member worked on a design for the site except for William as he was working on developing the animation to explain what the site does. After submitting various versions of the website it was decided that the design that Ed and Tom came up with would be implemented. From this stage we assigned ourselves tasks and a deadline for completion so that we could have something to show to the client and to present for our milestone. One of the first iterations of the website can be seen below:



This iteration had the Registration buttons over the photo on the main page. There only one fixed photo and the menu bar was above the photo and a dark blue color that was part of the HEROES color scheme. The above iteration was the version created by Arick before we decided to go with what Ed and Tom had which was implemented in milestone 2. Milestone 2, which was released on February 13, included photo slide implementation; animation development and navbar/index development which reflected our efforts to produce a final style to begin functionality work on. This milestone also had a ReadMe File on how to access and edit files.

We had planned on having social media interaction between the HEROES website and others such as LinkedIn and Facebook but we discovered that LinkedIn had changed their rules and would not allow businesses or organizations to have an account without paying a fee.

Milestone 3 release included more functionality with going from page to page and playing video as well as adding a scheduling link to Time Trade so that users could coordinate times on a calendar. HEROESforStudents.org was tested for functionality by teachers at William's workplace. This was valuable as we could get genuine feedback from the type of targeted users the website was intended for. Milestone 4, which was released on March 13, involved us looking back at our challenges, progress and goals and putting that in a video. The video illustrates what we initially were presented with by the client, the client's requests for the website and the state of the HEROES website at that point. On March 4 our client had a presentation and needed the website to be functional enough to register users at the presentation but also needed it to look good. Our team was able to deliver a functional and modern looking website compared to what we began with and our client informed us that the presentation was a huge hit! Although this was a major accomplishment for our team we realized we still had significant work to do before we would hand-off the website to the client. In the fifth milestone release the additional requests and changes that Chris requested were in development. We were working on content for the pages, a news feed for articles of interest, photo structure and text format were among the final requests we worked on.



There were setbacks and work-arounds made throughout development of the website. The animation that was created was having issues rendering/playing from the video file on the GoDaddy domain so the file was uploaded to Vimeo and the lightbox photo and video window application integrated into the What We Do page was pointing to the URL for the video on Vimeo. There was a lot of time spent editing the animation video before the first release and more revision afterwards. The look of the website evolved from having jpg buttons for the ‘donate’ & ‘Time Trade’ buttons to a simpler button structured to blend in better with the look of the website.

Our client wanted to be able to update content on the website or to be able to rely on someone else to do so and requested that instructions be made specifying how content on the website can be updated. It was decided that a procedure should be made in order to ensure that the client had reliable documentation for updating relevant content on the HEROES website pages. To make it more user friendly a table of contents was added to the procedure so that users could use the hyperlink chapters to quickly get to the appropriate procedure.

Table of contents for procedure manual

The screenshot shows a Microsoft Word document titled "Procedure to update content for HEROES - Microsoft Word (Product Activation Failed)". The ribbon tabs are Home, Insert, Page Layout, References, Mailings, Review, and View. The font is Cambria (Heads) size 14. The styles ribbon shows "Normal" style selected. The table of contents is as follows:

Table of Contents
Modifying Web Hosting Code Files for HEROES for Students2
Putting photos into Homepage Slideshow5
Changing animation/video files and photo captions in What We Do page7
Changing Values paragraphs in What We Do page9
Updating Board of Advisors photos and text10
Updating News Feed links11

Page: 1 of 11 | Words: 946 |

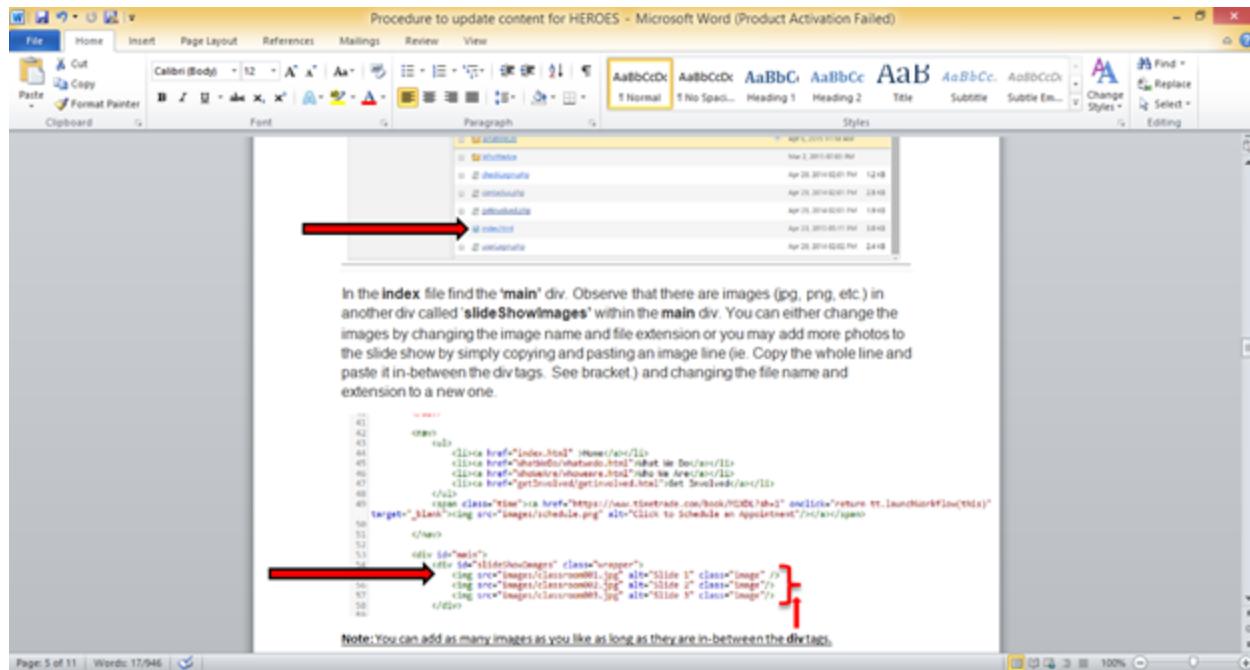
Procedure for updating website

The screenshot shows a Microsoft Word document titled "Procedure to update content for HEROES - Microsoft Word (Product Activation Failed)". The ribbon tabs are Home, Insert, Page Layout, References, Mailings, Review, and View. The font is Cambria (Heads) size 14. The styles ribbon shows "Normal" style selected. The section title is "Modifying Web Hosting Code Files for HEROES for Students". The steps are:

- Step 1:** Logon to GoDaddy.com account with username and password.
- Step 2:** At 'My Account' page under the 'Products' tab click on the green 'Manage' button that is to the right of the 'Web Hosting' section.
- Step 3:** At the next page there will be another 'Manage' button. Press the Manage button.

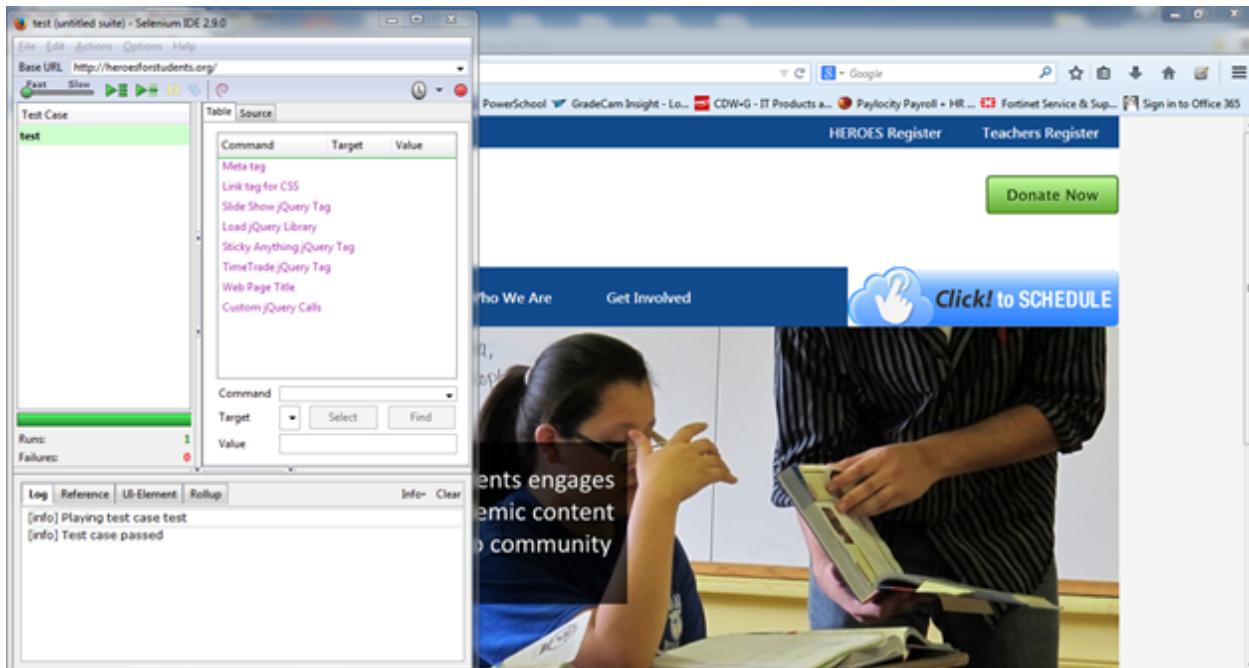
Page: 2 of 11 | Words: 946 |

Hyperlinking chapters for procedure manual



Testing

For milestone 6 we used Selenium IDE to test the functionality of our website. Tests we did included full functionality of the website and the buttons, each of our videos on the what we do page, functionality of buttons on the who we are page, functionality of the buttons and picture links on the get involved page including the email portion, and functionality of both of the signup forms. Also all the tags, jQuery calls and jQuery libraries were tested.



Test 1: This test was performed to check all Tags, jQuery calls and libraries.

Command	Target	Value
open	/index.html	
clickAndWait	name=submit	
select	id=Prefix_1	label=Mr.
type	id=First%20Name_1	Charles
type	id=Last%20Name_1	Brown
type	id>Email%20Address_1	snoopy@gmail.com
type	id=Mailing%20Address street_1	123 Sesame Street
type	id=Mailing%20Address city_1	Nowhere
select	id=Mailing%20Address state_1	label=Arizona
type	id=Mailing%20Address zipcode_1	85001

Log:

```
[Info] Executing: [clickAndWait | name=submit |]
[Info] Executing: [select | id=Prefix_1 | label=Mr. |]
[Info] Executing: [type | id=First%20Name_1 | Charles |]
[Info] Executing: [type | id=Last%20Name_1 | Brown |]
[Info] Executing: [type | id>Email%20Address_1 | snoopy@gmail.com |]
[Info] Executing: [type | id=Mailing%20Address|street_1 | 123 Sesame Street |]
[Info] Executing: [type | id=Mailing%20Address|city_1 | Nowhere |]
[Info] Executing: [select | id=Mailing%20Address|state_1 | label=Arizona |]
[Info] Executing: [type | id=Mailing%20Address|zipcode_1 | 85001 |]
[Info] Test case passed
```

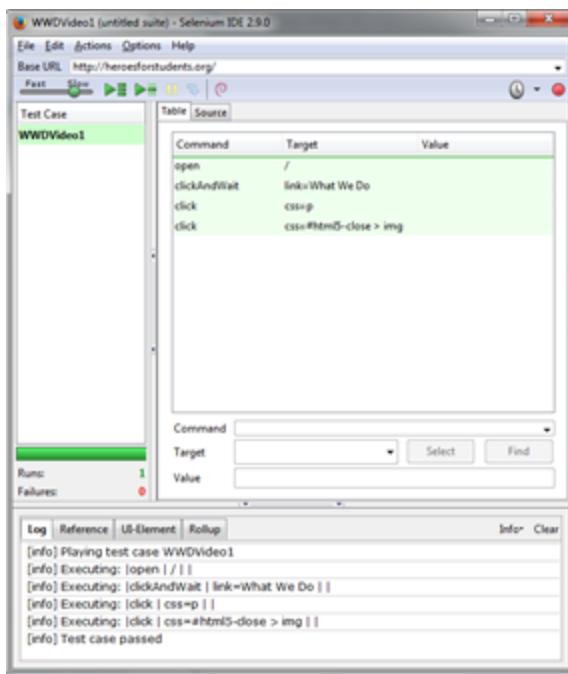
Test 2: This test to see if ‘Donate’ button on the Heroesforstudents.org Home page will work and also inputting of data into the fields to assure functionality.

Command	Target	Value
open	/index.html	
clickAndWait	links:Get Involved	
clickAndWait	links:Who We Are	
clickAndWait	links:What We Do	
clickAndWait	links:Home	

Log:

```
[Info] Playing test case Heroes Function Tests1
[Info] Executing: [open | /index.html |]
[Info] Executing: [clickAndWait | link=Get Involved |]
[Info] Executing: [clickAndWait | link=Who We Are |]
[Info] Executing: [clickAndWait | link=What We Do |]
[Info] Executing: [clickAndWait | link=Home |]
[Info] Test case passed
```

Test 3: This test to make sure navigation from Home Page>Get Involved Page>Who We Are Page>What We Do Page>Home Page is successful.

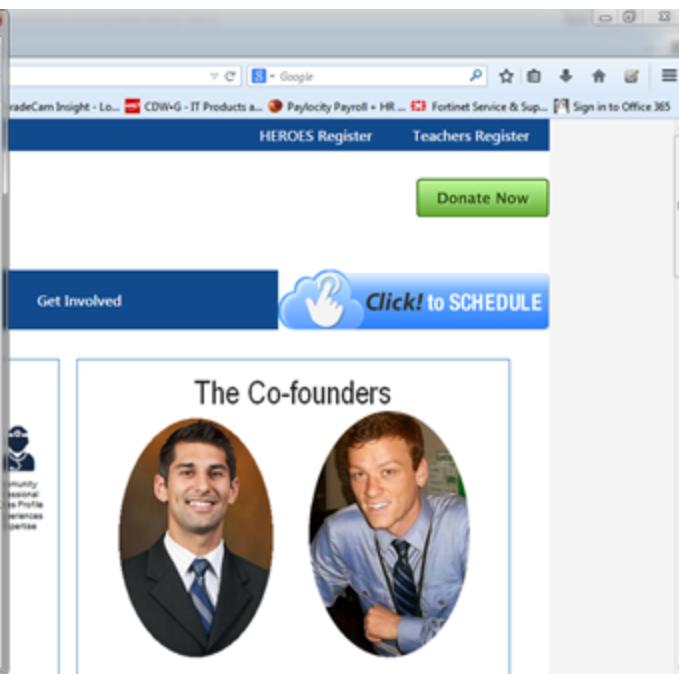


The screenshot shows the Selenium IDE interface with a test case named "WWDDVideo1". The test steps are listed in the table:

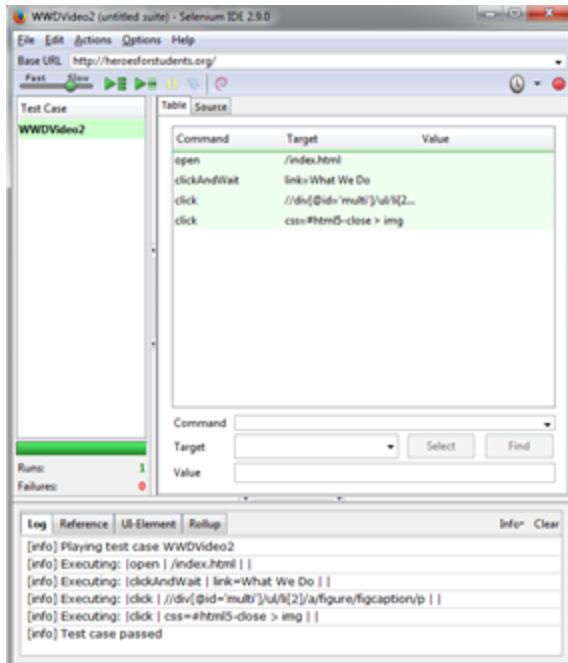
Command	Target	Value
open	/	
clickAndWait	link=What We Do	
click	css=p	
click	css=#html5-close > img	

The status bar at the bottom indicates "Info" and "Clear". The log pane shows the following output:

```
[Info] Playing test case WWDDVideo1
[Info] Executing: [open | / | ]
[Info] Executing: [clickAndWait | link=What We Do | ]
[Info] Executing: [click | css=p | ]
[Info] Executing: [click | css=#html5-close > img | ]
[Info] Test case passed
```



Test 4: This tested the animation video on the “What we do” page.

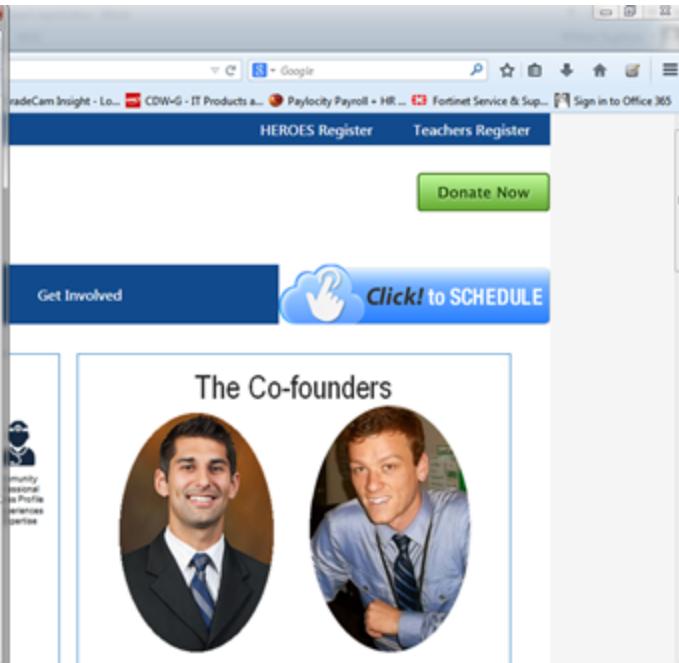


The screenshot shows the Selenium IDE interface with a test case named "WWDDVideo2". The test steps are listed in the table:

Command	Target	Value
open	/index.html	
clickAndWait	link=What We Do	
click	//div[@id='multi']/ul/li[2]/a	
click	css=#html5-close > img	

The status bar at the bottom indicates "Info" and "Clear". The log pane shows the following output:

```
[Info] Playing test case WWDDVideo2
[Info] Executing: [open | /index.html | ]
[Info] Executing: [clickAndWait | link=What We Do | ]
[Info] Executing: [click | //div[@id='multi']/ul/li[2]/a | ]
[Info] Executing: [click | css=#html5-close > img | ]
[Info] Test case passed
```



Test 5: This tested the About HEROES video on the “What we do” page.

The screenshot shows the Selenium IDE interface on the left and a web browser window on the right. The browser displays the 'What we do' page of the HEROES For Students website. The Selenium IDE table contains the following test steps:

Command	Target	Value
open	/	
clickAndWait	link=What We Do	
clickAndWait	links Who We Are	
clickAndWait	links Get Involved	
click	css=img[alt='Register as ...']	
waitForPageToLoad		3000
open	/	
clickAndWait	links Get Involved	
open	/getinvolved/getinvolved.html	

The log panel at the bottom of the IDE shows the execution of these steps. The browser window shows the 'Get Involved' section of the website with three cartoon superhero characters.

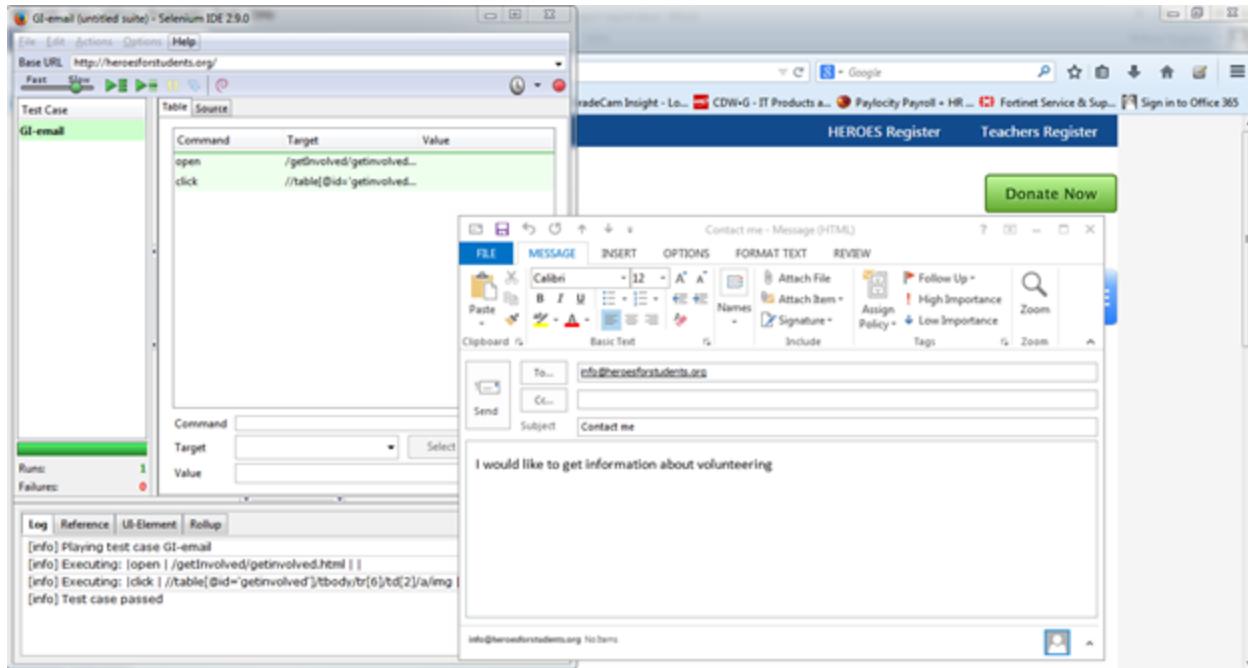
Test 6: This test checked the HEROES registration link on the “Get Involved” page. It successfully linked to the Google Docs page for HERO registration.

The screenshot shows the Selenium IDE interface on the left and a web browser window on the right. The browser displays the 'Get Involved' page of the HEROES For Students website. The Selenium IDE table contains the following test steps:

Command	Target	Value
open	/	
clickAndWait	link=What We Do	
clickAndWait	links Who We Are	
clickAndWait	links Get Involved	
click	//table[@id='getinvolved...']	
waitForPageToLoad		3000
select	id=entry_735095912_year	label=Year
goBack		

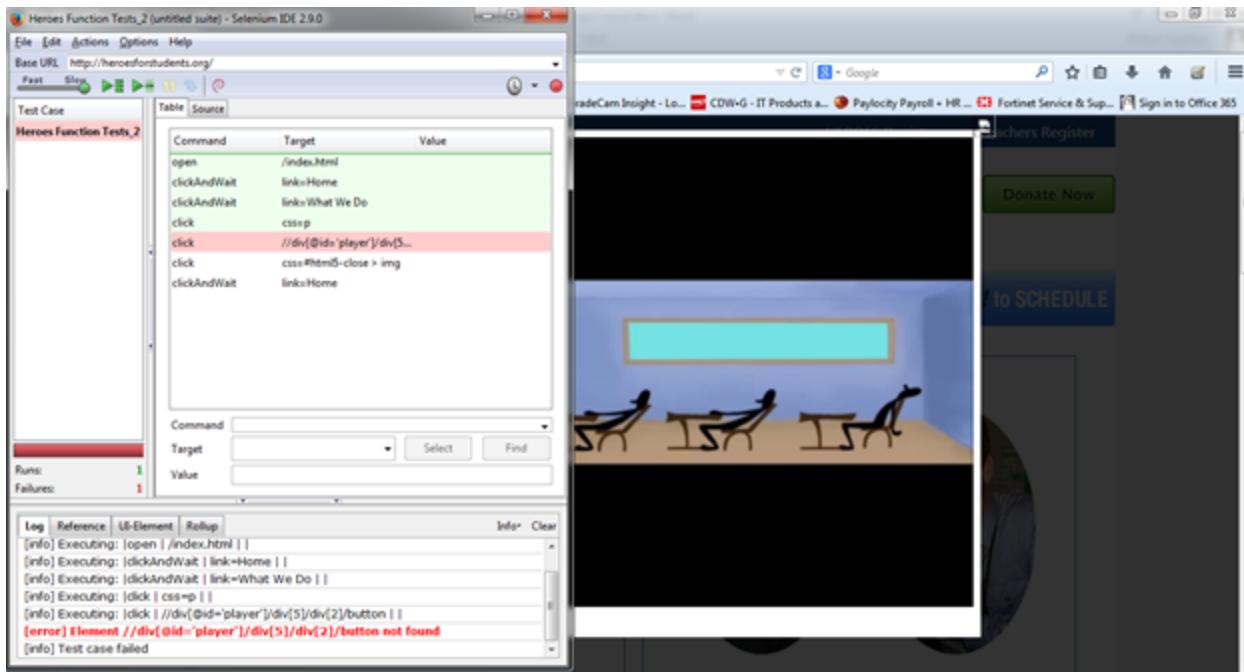
The log panel at the bottom of the IDE shows the execution of these steps. The browser window shows the 'Get Involved' section of the website with three cartoon superhero characters.

Test 7: This test checked the Teacher registration link on the “Get Involved” page. It successfully linked to the Google Docs page for teacher registration

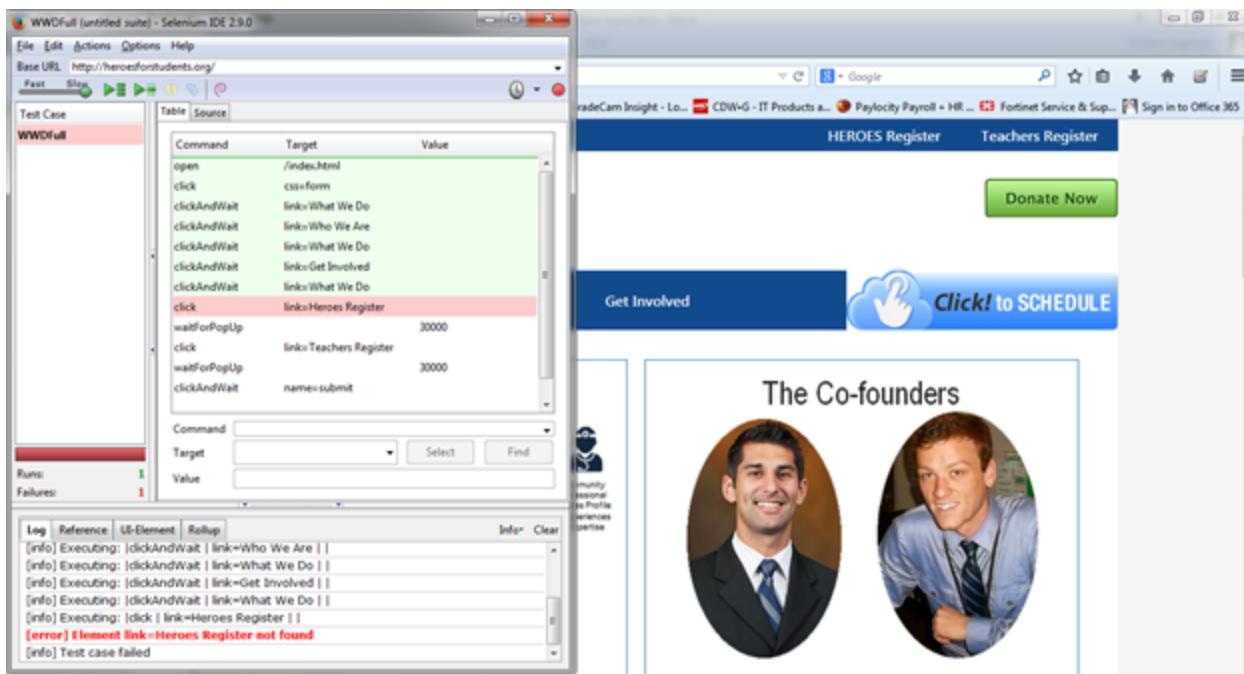


Test 8: This test checked the email link functionality for the “Volunteer” link on the “Get Involved” page. It successfully open up the default email client and filled in the “to” address, subject and a brief message asking for more information.

The last two tests show as “failed” but they are not really failures. Selenium has an issue with delays or waiting sometimes. So they list the test as fails even though they performed as required. We researched this issue when performing these tests and it appears that it is a very common problem. We have since researched this issue further and it seems related to the fact that “clickandwait” was trying to perform its action on a pop up element. It was recommended the test be switched to “waitFor” element command. Either way, other tests confirmed that the link is working so for our purposes a new test was not required.



Test 9: This test shows that the animation video failed, but as you can see it passed. Selenium had some issues with waiting between commands when the element selected is a pop up.

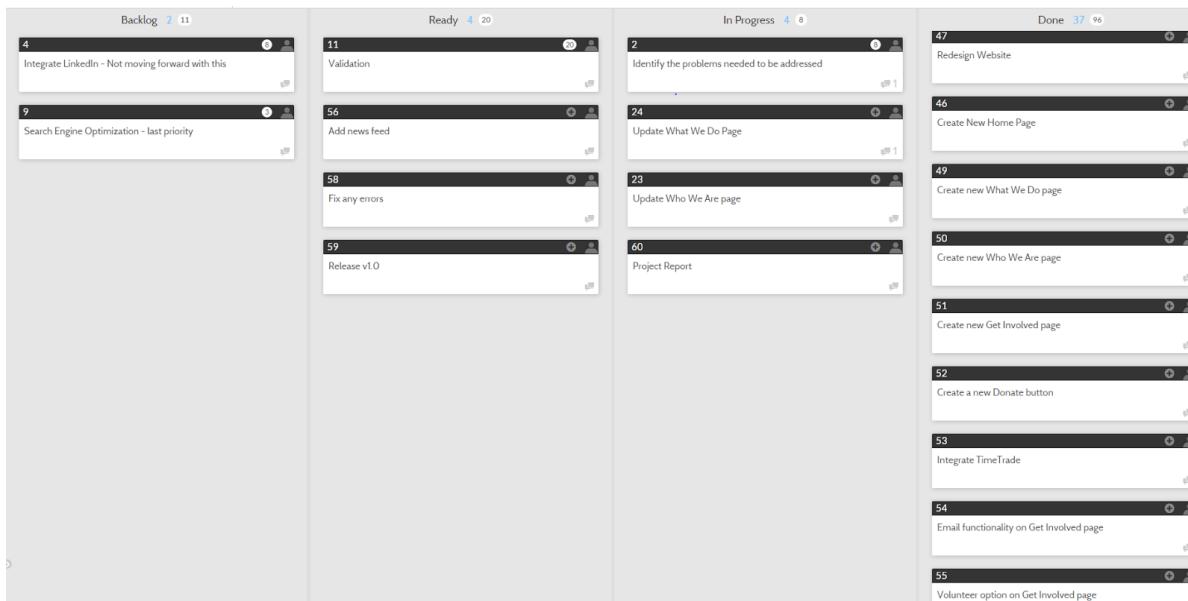


Test 10: This test checked the full website functionality. It shows the HEROES register link as failed, however as other tests have shown this link works fine.

Waffle IO

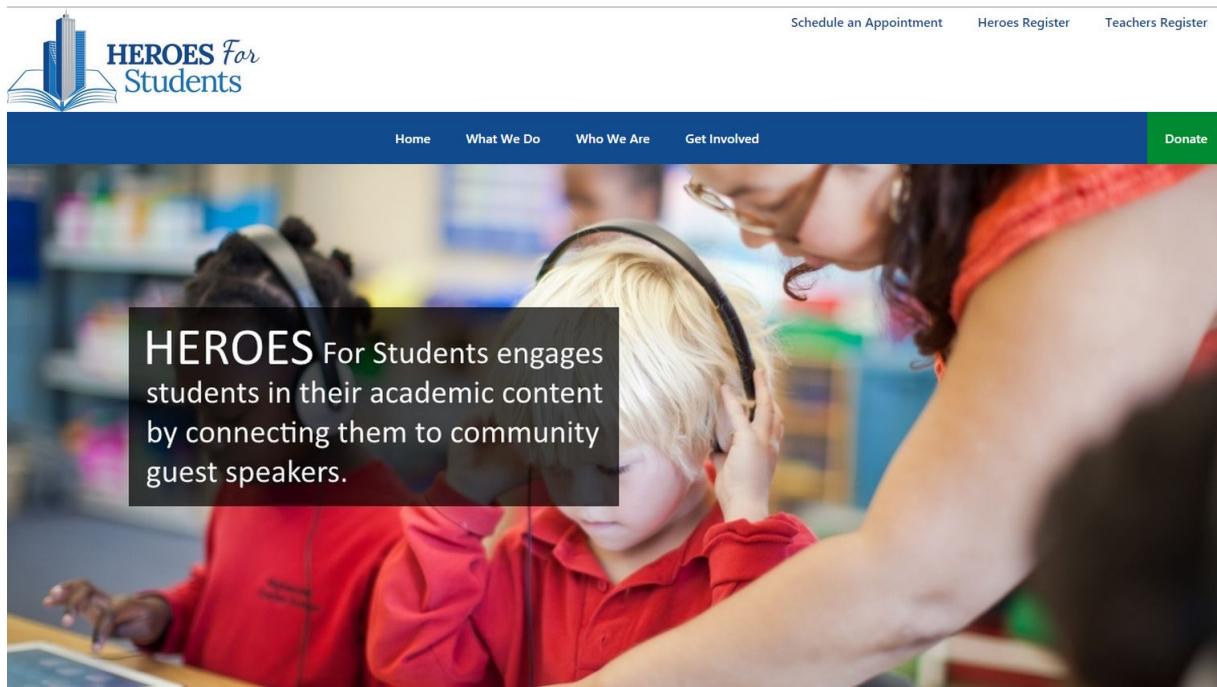
Throughout the life of our project we decided to use waffle.io as our task board. The task board was able to help us visualize what needed to be done currently as well as what was anticipated to be done in the future. It also helped us divide the tasks appropriately between group members. Since it could be accessed by every group member, once someone finished a task they could go in and move their task to done as a notice to the group members that the task is finished. The option to input comments on each task was also a tremendous help. If we had any questions that needed to be answered or if we needed help we would write comments on the task in question. The biggest problems we had with the task board was not updating it after we finished a task. Since we all had a good understanding of the tasks we needed to accomplish, this didn't affect us much. We communicated very well in person, by email, and by text to discuss what was ready to be implemented, what was in progress and what we had finished. The task board was mainly there as a visual for us so we could go back to it and see if we had forgotten anything. Our client was also very helpful at keeping us on track. During every in person meeting we had, we would come up with the tasks that needed to be done and assign each task to a group member. We would then write an email to the client and each group member listing the tasks and who was responsible for each task. This gave us a visual on what needed to be accomplished and we could then add those tasks to our task board as well.

Our Waffle IO dashboard



Screenshots of Final Website

Home page with slideshow



Home page news feed

A screenshot of the HEROES For Students news feed page. The top navigation bar includes "Home", "What We Do", "Who We Are", "Get Involved", and a green "Donate" button. Below the navigation is a large, blurred photograph of people at a table. The page title "News Feed" is centered above a list of news items. Each item includes a title, a date, and a brief description.

- Technology: Group preps students for STEM projects**
December 19, 2014
- Heroes For Students**
October 6, 2014
- Statewide festival seeks to spark student interest in science, tech**
February 10, 2014
- Glendale Kicks Off 2nd Annual Passport To Science Series, New Partnerships**
January 31, 2014
- Xplore, crash, snaps, apps and celebrate – 17 SEED SPOT Cohorts present at Demo Day**
December 12, 2013
- AZ Technology Council announces 16 startups to compete at Startup Connect AZ**
December 9, 2013

©2015, HEROES For Students Foundation

What We Do Page (the 2 photos contain videos when clicked on)

How it Works

HEROES For Students Matchmaking

Teacher Creates Classroom Topic
Community Professional Creates Profile of Experiences & Expertise
Matched based on what best complements students learning

The Co-founders

Two circular portraits of the co-founders.

HEROES (helping educators revive our economic success) is a standards-based classroom curriculum supplement and online platform for networking K-12 teachers to guest speakers from the community to apply students' academic content to the real world. The connections we foster between students and professional guest speakers have at least three important implications for students' future success:

First, students are more engaged in their classroom learning because they understand how it is relevant to their success in college and their future careers.

Finally, students are empowered when they relate with community members who offer diverse experiences, knowledge, and skills such that

What We Do text

CHANGE: We seek to develop business-education partnerships that will create transformational change in ways that businesses are able to successfully grow, connect with, and retain their customers through community support. We also value ways these relationships will bring transformational change to students' education, so students are able to critically think and apply their education to their future college and career opportunities.

KNOWLEDGE UTILIZATION AND APPLICATION: The business community understands the knowledge and skills the incoming workforce must have in order to be successful in a rapidly changing global market. We must share this understanding with students and educators at all levels to develop the critical thinking skills that are necessary to apply students' daily learning to the real world.

DIVERSITY: We seek a diverse group of businesses to partner with educators to expose students and educators to the variety of ways academic content applies to the real world. This requires a diversity of professions to partner with our schools. Additionally, the future workforce is increasingly diverse culturally, and we strive to seek partnerships with community professionals who reflect the diversity of the students we serve.

INNOVATION: We understand that the current students will be the next workforce of this nation. By connecting classroom learning to post-secondary professions, students will be able to innovatively create solutions for tomorrow's challenges. By connecting with students and educators, businesses will benefit as they gain experience innovatively preparing students for college and career readiness, which ultimately will increase the quality of their future workforce.

What We Do(Animation Video)



What We Do(About HEROES video)



Who We Are(Co-Founders)



Schedule an Appointment Heroes Register Teachers Register

Home What We Do Who We Are Get Involved **Donate**

Meet the Co-Founders

Richie Ressel
Masters Degree - Elementary Education | Mary Lou Fulton Teachers College

He has taught English as a second language for three years in a low-income school and is a Teach For America alumnus. guest speakers played a crucial role in his educational development. As a result, he also became a first generation college graduate. Despite the challenge of finding guest speakers, Richie persevered to bring guests from diverse backgrounds and careers to invest his students in their short- and long-term goals. He saw the positive effects these experiences had on motivating students, which led to greater academic achievement. This experience impassioned him to create a system that would facilitate connections between students and guest speakers in the classroom.

Chris Reina
Ph.D. - Management | W.P. Carey School of Business

This venture personally moves Chris because he has seen the importance of guest speakers in his own formative educational experience, which led him to be the first in his family to graduate from college. Chris has a passion for teaching and empowering learners in the classroom and has previously worked as a consultant creating English language training curricula with the mission of providing leadership opportunities to employees. These experiences opened his eyes to the link between educational opportunities and professional advancement in a concrete way as he saw employees attain levels of success they never previously thought possible. Chris has studied the positive effects that volunteerism has on employees in the workplace and has seen the transformative change that education can have. Chris is very excited to be involved with HEROES For Students.

Who We Are(Board of Advisors)

Home What We Do Who We Are Get Involved **Donate**



Students in their short- and long-term goals. He saw the positive effects these experiences had on motivating students, which led to greater academic achievement. This experience impassioned him to create a system that would facilitate connections between students and guest speakers in the classroom.

Chris Reina
Ph.D. - Management | W.P. Carey School of Business

This venture personally moves Chris because he has seen the importance of guest speakers in his own formative educational experience, which led him to be the first in his family to graduate from college. Chris has a passion for teaching and empowering learners in the classroom and has previously worked as a consultant creating English language training curricula with the mission of providing leadership opportunities to employees. These experiences opened his eyes to the link between educational opportunities and professional advancement in a concrete way as he saw employees attain levels of success they never previously thought possible. Chris has studied the positive effects that volunteerism has on employees in the workplace and has seen the transformative change that education can have. Chris is very excited to be involved with HEROES For Students.

Board of Advisors

















©2015, HEROES For Students Foundation

Get Involved page



Schedule an Appointment Heroes Register Teachers Register

Home What We Do Who We Are Get Involved **Donate**

Get involved with HEROES For Students

HEROES

If you want to give back to the community and inspire students to be the best they can be, please click on the image to the right to register to be a HERO so we can match you with a classroom.



Teachers

As a teacher you know your students have so much potential. If you would like to expose your students to a diversity of careers and further engage them in their course content by connecting it to real-world application, please click on the image to the right to register as a teacher so we can match you with a HERO.



Get Involved page

Home What We Do Who We Are Get Involved **Donate**



Teachers

As a teacher you know your students have so much potential. If you would like to expose your students to a diversity of careers and further engage them in their course content by connecting it to real-world application, please click on the image to the right to register as a teacher so we can match you with a HERO.



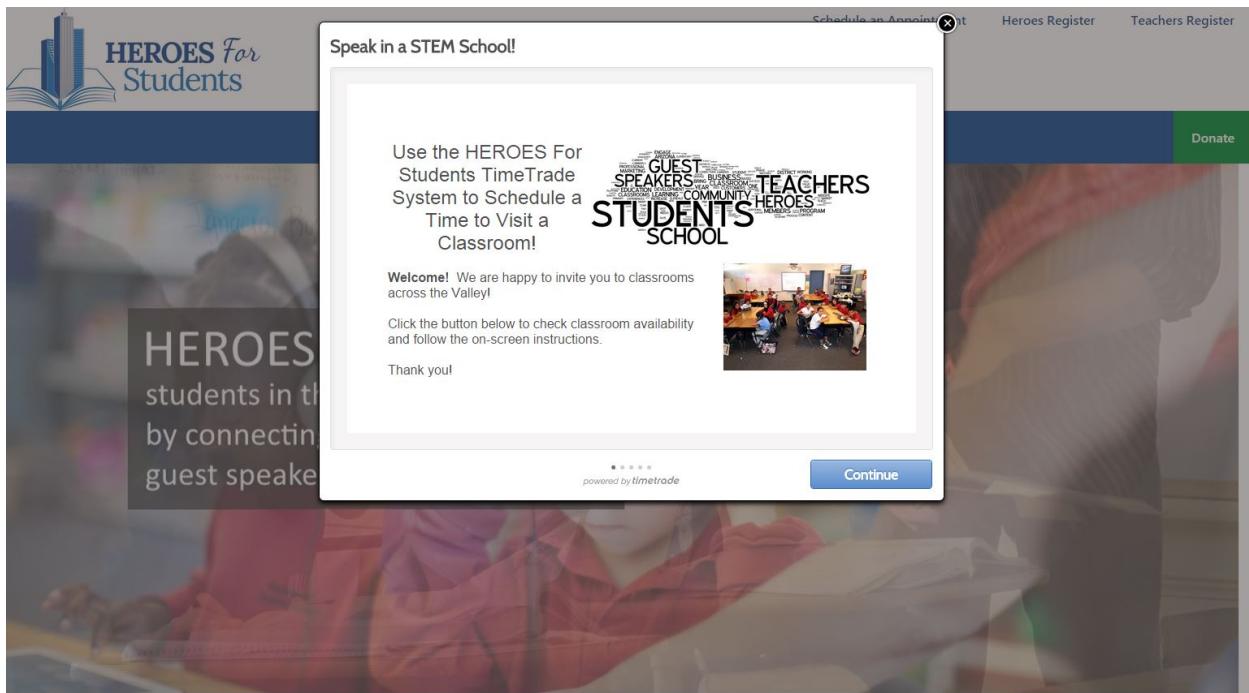
Volunteer

There are so many ways you can help today's youth. If you love what we're doing and want to volunteer your skills and expertise to helping us grow our impact at HEROES For Students, please click on the image to the right to register as a volunteer to help us grow our organization. We are always looking for passionate individuals who want to effect positive change in the realm of education.



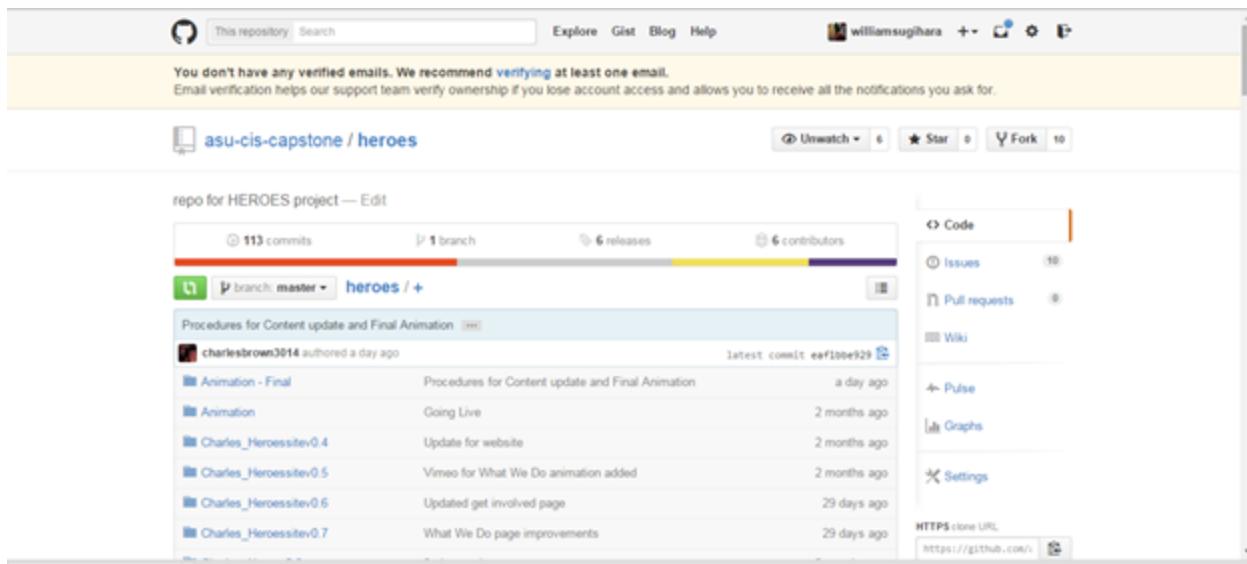
©2015, HEROES For Students Foundation

Schedule an appointment with TimeTrade



GitHub

For our project we used GitHub. GitHub is a web-based repository hosting service. It offers distributed revision control and source code management functionality. It also has other features such as access control and several collaboration features like wikis, task management, and bug tracking. We used it primarily as a repository. All team members uploaded code as it was completed, and all our milestones were submitted by creating commits. Other teams we able to view our code and make suggestions or changes as well. Below is an image showing some of the files that were uploaded to our repository.



Conclusion

In this report for the HEROES For Students Foundation website re-design, we have introduced our client and briefly described their mission regarding their organization. Additionally described is the website's previous layout and code structure and the concerns our group had with the project as a whole. Each milestone and our improvements to the website at each stage of our project is also discussed. Added features such as our slideshow, timetrade scheduling, new donate page, and general as well as JavaScript styling features have been implemented and are functioning well according to our client's needs and feedback. Though these features have been implemented smoothly, there are some additional features that will additionally improve the website if a future project is proposed.

Extra features that the HEROES For Students Foundation website include a login feature, Linkedin compatibility feature, and, if the client decides, an upgrade to their database management system. If a future project is introduced, a login and register feature where teachers and HEROES may register using their Linkedin profile would be an excellent improvement to the site. Our site would be able to scrape information from the user's Linkedin profile and add it to the register form. Additionally a remodel of their database may also be a significant improvement to their site. Though our client likes the simplicity of our Google Forms registration method, for security reasons, using a database management system such as mySQL would be greatly beneficial.