**Project Horseshoe Farm**

**User Documentation**

# 1. Login Credentials

The following is a list of usernames and passwords for access to the location of the current project, the email account associated with the x10 account and the login credentials for Project Horseshoe Farms GoDaddy account.

X10host:

<http://projhorseshoe.x10host.com/>

Username: [proj.horseshoe@gmail.com](mailto:proj.horseshoe@gmail.com)

Password: seniorDesign2016

Gmail:

Username: [proj.horseshoe@gmail.com](mailto:proj.horseshoe@gmail.com)

Password: seniorDesign2016

GoDaddy:

<http://projecthsf.org/>

Customer #/ username: 15111445

Password: EmmaandErv1n

PIN: 6044

\*NOTE: Will need PIN when talking to Godaddy

# 2. Future Development

## 2.1 Math and Reading day PDFs – File Management Instructions

The files for any sort of worksheets are in found by going to the root directory, then the worksheets folder, and then either reading or math folder.

## Root Directory for the component as of 4/26/2016

## 2.2 Hosting using GoDaddy

The source code is located on the CD in its folder as well as on the github at <https://github.com/pandaorb/TutoringBootstrapper>. Our group does not recommend continuing using x10hosting.com as a viable hosting for the website and database. Quite simply, it is too slow for use in development. An example of its use is when uploading a file to the hosting through cPanel, it may visually seem as the file has uploaded; however, it may take 10 minutes before the file or page is actually uploaded.

For hosting our database, we originally exported our database from WAMP using PHPMyAdmin. Then, we imported the raw SQL file into x10hosting.com.

Our group recommends porting the web component to GoDaddy's hosting. Our group does not have experience with transferring files to GoDaddy, nor can we offer advice to GoDaddy's file structure for hosting. It is possible it may be similar to x10hosting, but it would be for the best that any future developers consult with GoDaddy support through their phone number. The support agent will ask for a the customer# as well as the PIN for the account, prior to helping. GoDaddy's tech support is very helpful and our group has talked with a few times at length in regards to hosting capabilities, what would fit our objective, and just general questions about anything to do with hosting websites and databases.

As for hosting the database, it current database can also be exported from x10hosting.com and, likely, be imported into GoDaddy.com's hosting for the chosen domain. In our CD, we have provided the exported database.

## Problems to be aware of when working with x10

It will take time for the website to update after uploading changes.

The homepage must be named index.html.

Also, pages will not always load. When it shows a blank screen, it is required to refresh the page in order to see the contents of that page.

It is strongly recommended to move to GoDaddy.

## User Stories

* Child resume reading from last page (User Story 6)
* Child/remote tutor screen share control (User Story 8)
* Auto login into external websites (User Story 14)

Content for future user stories can be sought by checking out the external resource App Meeting Noted.gdoc which was directly provided by the Horseshoe Farm Fellows and last edited on March 18th, 2016. The document is provided in the CD. Also, the diagrams provided by the sponsors are also on the CD.

The following section is also part of our team's Cycle 3 report:

## Future Work

While not a complete product, the baseline features are implemented to render it useable. Future groups should add additional core features (such as session timeout) as well as address any bugs that may be present in the user stories we worked on.

Below are notes and comments on user stories that are completed, but with known issues or possible complications. Also, below are user stories that are not completed.

3.3.1 User Story# 6: Child resume reading from last page

This user story was not started during this cycle or by the end of this cycle. All research is left up to the next group.

3.3.2 User Story# 8: Child /tutor screen share control

This user story involves the use of the program TeamViewer. Our group did research into ways to automate login into TeamViewer to fulfill this user story. From speaking with our TA, we got wind of a way that would involve command line. Our thoughts on it would be to create a batch file, an executable on the desktop that would auto login into TeamViewer for the user. Either the batch file would be customized per user, or it would pull in login information from the database through some means.

3.3.3 User Story# 14: Auto login into external websites

For user story# 14, John has done a lot of research on his own and spoke to two of his most credible sources for web development. One works for CWS(Campus Web Solutions), the other at ENS(Engineering Network Services). There are some options for the user story but, unfortunately, they do not lead to this user story being completed within the remaining time of this cycle.

John’s conversation notes with his contact who has worked at CWS:

It is possible, e.g. AuAccess and Canvas, however they would likely need a central authentication server to do so, or some sort of API to allow for that.

You would have to either set up a partnership with those sites and allow their authenticatation through your portal on login, have a central authentication server, or pray they have an API for that. Short of that, you can't use your cookies on their sites - it won't be set up to allow that.

You'd likely have to contact each place directly and see if they have anything that can support that. Cookies will be fine for your own authentication, but it won't allow you to access anyone else's sites

John researched forging cookies, and using the POST method, which duplicates the form and attempts to enter it in on the external site, as well as storing sessions for each user in the database.

POST method will not work, mostly due to anti-forgery, anti-hijacking implementations in place on the destination domain.

Session data is stored in cache and cookies. The issue is that a cookie is needed to have a session, and authentication is needed to have a cookie. Cookies come with an internal expiry. This expire date has a time of persistent, can set for indefinite, or whenever, but whenever it expires, it will no longer provide information

Authentication typically works like: Send out cookie, get a CAS cookie, then the user logs in with that.

From speaking with John’s sources and from research, here are the options, ranked with the best option first:

1. Central Authentication Server - need partnership with the other company/party

2. API

3. Some other arrangement.

1. CAS with partnership:

We can ask Khan for a partnership. If they say yes, they would work with us to get us up and running. They may provide us with an API if they do not decide to work with us directly, which will likely provide us with a way to tie into their system.

2. API

Google authentication API

Perhaps using this API for simply interfacing with Kindle and Khan for just logging in would be for the best since each Child/student has a Google account through their gmail account.

<https://developers.google.com/identity/>

<https://developers.google.com/api-client-library/javascript/features/authentication>

Khan authentication API

This API will allow this project to grab behavior data regarding the Child/student -- badges, exercises completed, analytics, etc.

<http://api-explorer.khanacademy.org/group/api/v1/user>

<https://github.com/Khan/khan-api/wiki/Khan-Academy-API-Authentication>

Google SAML (SSO)

<https://developers.google.com/google-apps/sso/saml_reference_implementation?csw=1>

SAML Single Sign-on for Khan

(not currently supported, but should be in the future)

<https://www.bitium.com/khan-academy-saml-provider>

3. Some other arrangement

One approach John looked into was the use of iMacros.

<http://www.hacktabs.com/how-to-automate-login-to-website/>

John had researched iMacros and drew conclusions to its limitations. iMacros has a desktop application as well as recently releasing a Firefox Add-on and a Google Chrome Extension.

Of the options, the iMacros desktop application was the most advanced and had the most documentation for using it. It is possible to run a recorded macro from javascript in Internet Explorer because of its use of ActiveX. Also, it was possible in Firefox, but buggy. As for Chrome, it was not possible and this is probably why they made an Add-on and an extension, respectively.

John spoke with Dr.Dorsey, our sponsor, in regards to this option which would need to rely on an app that is on the desktop. Because it is on the desktop and not web-based like the rest of our web-component, it is not portable, thus it is not meeting the customer's requirements. John expressed that a Child, a student, would need to be on the same computer each day they tutored for the auto-login to work for external websites through the use of iMacros on the desktop.

As for the Firefox Add-on, it was not looked at since our operations are centered around Google Chrome. John managed to try out the Google Chrome Extension. It works really well from within the browser, and it saves macros to the google account user's bookmarks. Macros cannot be ran from javascript, they must be ran from utilizing the iMacros extension. This would not be ideal for us, because it would need the user to not only install the extension but also log into their google chrome browser to save the extension for future use. Also, that macro could be recorded once and placed into each student's files/bookmarks in Chrome, but that is not easily scalable nor is it efficient. One more thing to add is that the amount of documentation present for use or manipulation of the iMacros Chrome extension is relatively low.

In conclusion, due to the lack of resources, as well as it being not ideal for this project, the use of iMacros should not be used due to its limitations for future development. A partnership is the most ideal for future development. The use of at least one API is also very promising for future development for user stories and functionality.

3.3.3 User Story# 15: Admin

It is possible to pair a Child with a Remote Tutor even though a Child is not present. This is an issue because this is not wanted behavior because it could cause issues if the Child is not present.