QA Testing Log

JAN 12 – 21 SPRINT 1

* Testing website functionality:
  + Website on following platforms:
    - Windows
      * Chrome – Fully functional
      * Firefox – Fully functional
      * Microsoft Edge – Fully functional
    - Mac
      * Safari – Fully functional
      * Chrome – Fully functional
      * Firefox – Fully functional
    - Android
      * Chrome – Top navbar does not show up properly otherwise functional
      * Samsung Internet app – Top navbar does not show up properly otherwise functional
    - IOS
      * Chrome – Top navbar does not show up properly otherwise functional
      * Safari – Top navbar does not show up properly otherwise functional
* Testing user account creation:
  + Desktop Web Browsers
    - User account creations are successful
    - User log in is successful
  + Mobile Web Browsers
    - User account creations are successful
    - User log in is successful

JAN 22 – February 3 SPRINT 2

* Testing website functionality:
  + Website on following platforms:
    - Windows
      * Chrome – Fully functional
      * Firefox – Fully functional
      * Microsoft Edge – Fully functional
    - Mac
      * Safari – Fully functional
      * Chrome – Fully functional
      * Firefox – Fully functional
    - Android
      * Chrome – Top navbar does not show up properly otherwise functional
      * Firefox - Top navbar does not show up properly otherwise functional
    - IOS
      * Chrome – Top navbar does not show up properly otherwise functional
      * Safari – Top navbar does not show up properly otherwise functional
* Testing account creation:
  + Windows:
    - Edge: When submitting information to create an account, an error shows “Please enter a valid.”. This message needs to be changed to be more detailed and not show if all fields are submitted/added to database.
    - Chrome: Same behavior as Edge above
    - Firefox: Same behavior as Edge/Chrome above
  + Mac:
    - Safari: Same behavior as browsers on Windows
    - Chrome: same behavior as Chrome on Windows
    - Firefox: same behavior as Firefox on Windows
  + iOS:
    - Safari: Unable to test due to missing navbar (see “website functionality”)
    - Chrome: Unable to test due to missing navbar (see “website functionality”)
* Testing email verification:
  + Received email indicating “Visit the following link to activate your account” but no link is shown. Tested email sent to iCloud and gmail email addresses.
* Design issues:
  + Windows:
    - Edge: Perhaps make “login” or “register” on homepage hyperlinks to their corresponding webpages
    - Firefox: Perhaps make “login” or “register” on homepage hyperlinks to their corresponding webpages
    - Chrome: Perhaps make “login” or “register” on homepage hyperlinks to their corresponding webpages
  + Mac:
    - Safari: same as browsers above
    - Firefox: same as browsers above
    - Chrome: same as browsers above
  + iOS:
    - Safari: same as browsers above
    - Chrome: same as browsers above
  + Android:
    - Firefox: same as browsers above
    - Chrome: same as browsers above

FEB 4 – FEB 17 SPRINT 3

* WEBSITE FUNCTIONALITY
  + Mobile testing
    - IOS and Android are still having issues with navigation of website. (SR)
    - Top navbar does not show up properly on iOS Safari or iOS Chrome (DH)
    - Unity demo functional across all browsers. (SR)
  + User Account Creation
    - Needs confirm password for extra security when creating accounts. (SR)
    - Email verification with link and security code fully functional on desktop web browsers. Tested on chrome, firefox, safari and edge. (SR)
    - Need verification to confirm login status on the top of the page. (SR)
    - Currently there is no way to verify if a user is currently logged in to their account on the website. (SR)
    - Need to redirect users to the main playable game page when logged in successfully. (SR)
    - Successful account creation message now appears properly (DH)
    - Receiving verification email to an iCloud email account sends a invalid link. Testing with Gmail email address works properly. (DH)
  + Website Design Issues:
    - Clicking “login” or “register” should be hyperlinked to their corresponding webpages. (DH)
* Game functionality
  + Old build still functioning properly on the demo page of the website. (SR)
    - Current issues include collision on objects are not working properly but collision is working properly within the editor. (SR)
  + Take a break reminder pops up as intended but does not disappear currently and sits at the top of the game. (SR)(DH)
  + Building towers and placing them on the map is functioning as intended. (SR)
  + Scoring still needs to be implemented and tested. (SR)
  + Clicking “new game” starts a scene and a sound plays. This is working as intended. (DH)
  + Settings gear icon presents landing screen. This is functional. (DH)
  + Resume button restarts game, should resume the current world. (DH)
  + Quit button on the landing screen is not functional. (DH)
  + Settings button is not functional. (DH)
* UI functionality
  + Need to build a health bar that is easily seen by players indicating health of home base structure. (SR)
  + Resource management bar is implemented, needs to be tested further based on progression through the game. (SR)
  + Gear icon implemented in the UI which brings up the paused menu, working as intended. (SR)
  + Considering adding enemy health bars to help with identifying how much damage is being done by the player. (SR)
* Database testing
  + ORM layer code installed. (SR)
  + Firebase installed to pull data from unity to populate the leaderboard database. (SR)

FEB 18 – MAR 2 Sprint 4 (Blue text - Doug Hartley Red text - Stevan Rajkovic)

● WEBSITE FUNCTIONALITY

○ Mobile testing

■ IOS and Android now have a functional website with appropriate navbar. Issue from Sprint 3 is resolved.

■ Unity demo functional across all browsers.

* New log in location on upper right corner of webpages function properly
* New button on top right corner of the page successfully redirects user to their own user profile pages

○ User Account Creation

■ Confirm password is only available after the account has been made. It needs to be part of the registration process.

■ Email verification with link and security code still fully functional on desktop web browsers. Tested on chrome, firefox, safari and edge and mobile Safari.

■ Email verification works properly on Gmail accounts.

■ We still need to show that the user is logged in with an option to log out.

■ We still need to redirect users to the main playable game page when logged in successfully.

■ Successful account creation message still appears properly.

■ Receiving verification email to an iCloud email account sends a invalid link. Testing with Gmail email address works properly. This is because on emails other than Gmail, there is no period before .org, resulting in an invalid link.

* New log in location on upper right corner of webpages function properly
* New button on top right corner of the page successfully redirects user to their own user profile pages

○ Website Design Issues:

■ Clicking “login” or “register” should be hyperlinked to their corresponding webpages. This needs to be done before project completion.

* Log out option needs to be more visible for users and not buried in the user account page.
* Leaderboard needs to be connected and updated properly with new scores.
* Need to give users a way to change email addresses linked to the account.
* Changing email addresses in the user profile page needs to send out a new email verification code.

● Game functionality

○ Updated build still functioning properly on the demo page of the website.

■ Object collision works in editor.

○ Scoring still needs to be implemented and tested.

* New game new world generation is functional, new maps, asset locations and collisions are all working as intended.
* Tower projectile animation and function are working as intended, sound still needs to be decided on.
* Enemy health showing as intended.
* Tower and main structure health needs to be more visually noticeable by the player.
* Enemy animations are working as intended.
* Tower tracking animations working as intended.
* Possibly need to have visual indicator of tower placements and effective tower range so that the players have a better understanding of how the towers effective ranges.
* Need to finalize and implement wave functionality.
* Mobile controls are still working as intended.

● UI/UX functionality

○ Gear icon implemented in the UI which brings up the paused menu, working as intended.

* Resource management bar is being updated as intended using intended resources on every newly generated map.

○ Clicking “new game” starts a scene and a sound plays. This is working as intended.

○ Settings gear icon presents landing screen. This is functional.

○ Resume works properly.

○ Quit button on the landing screen is not functional.

○ Settings button is not functional.

MAR 3 – MAR 15 Sprint 5 (Blue text - Doug Hartley Red text - Stevan Rajkovic)

● WEBSITE FUNCTIONALITY

○ Mobile testing

■ As of 3/15, IOS and Android now have a functional website with appropriate navbar.

■ Unity demo functional across all browsers.

* As of 3/15, login/logout work properly.
* As of 3/15, New button on top right corner of the page successfully redirects user to their own user profile pages

○ User Account Creation

■ As of 3/15, users are now able to confirm their password before officially creating the account. Issue from sprint 4 is resolved.

■ Email verification with link and security code still fully functional on desktop web browsers. Tested on chrome, firefox, safari and edge and mobile Safari.

■ Email verification works properly on Gmail accounts.

■ There is now an option to show that the user is logged in. However, it would be nice to click the username on the top right-hand corner which presents a drop-down menu showing to logout.

■ As of 3/15, logging in redirects users to the game. This is resolved from sprint 4.

■ Successful account creation message still appears properly.

■ As of 3/15, receiving verification email to an iCloud email account sends a invalid link. Testing with Gmail email address works properly. This is because on emails other than Gmail, there is no period before .org, resulting in an invalid link.

○ Website Design Issues:

■ Clicking “login” or “register” should be hyperlinked to their corresponding webpages. This needs to be done before project completion.

* Log out option needs to be more visible for users and not buried in the user account page.
* Leaderboard needs to be connected and updated properly with new scores.
* Need to give users a way to change email addresses linked to the account.
* Changing email addresses in the user profile page needs to send out a new email verification code.
* Leaderboard Functionality (NEW)
  + New implementation of personalized scores are on all user profile pages now.
  + Leaderboard is pulling and posting scores properly.
  + Terminology of the leaderboard page needs to be tweaked.
  + Need to consider hiding real names of the players and only use the alias, or consider it an “opt in” feature.

● Game functionality

○ Updated build still functioning properly on the demo page of the website.

■ Object collision works in editor.

* “Start wave” button works as intended.
* Music works as intended.
* Need a pause/landing screen button with the new UI.
* New landing screen UI works as intended when option to “maximize on play” is selected. If it isn’t, the settings and quit buttons do not work.
* Quit button does not work, regardless if “maximize on play” is selected or not.
* Volume changing UI works as intended.
* Scene changing UI works as intended.

○ Scoring still needs to be implemented and tested.

* New game and new world generation is functional, new maps, asset locations and collisions are all working as intended.
* Tower projectile animation and function are working as intended, sound still needs to be decided on.
* Tower upgrade system needs to be implemented.
* Enemy health showing as intended.
* Tower and main structure health now more visible and easier to discern.
* Enemy animations are working as intended.
* Tower tracking animations working as intended.
* Visual indicators for towers and attack ranges still need to be finalized.
* Wave functionality is up and running as intended.
* Game over function and score posting works as intended.
* Mobile controls are still working as intended.

● UI/UX functionality

○ Gear icon implemented in the UI which brings up the paused menu, working as intended.

* Resource management bar is being updated as intended using intended resources on every newly generated map.
* New UI graphics have been implemented across the board and is working as intended.

○ Clicking “new game” starts a scene and a sound plays. This is working as intended.

MAR 16 – MAR 30 Sprint 6 (Blue text - Doug Hartley Red text - Stevan Rajkovic)

● WEBSITE FUNCTIONALITY

○ Mobile testing

■ As of 3/29, IOS and Android still have a functional website with appropriate navbar.

■ Unity demo functional across all browsers.

* As of 3/29, the full screen button works properly.
* As of 3/29, still login/logout work properly.
* As of 3/29, new button on top right corner of the page successfully redirects user to their own user profile pages

○ User Account Creation

■ As of 3/29, users are still able to confirm their password before officially creating the account.

■ Email verification with link and security code still fully functional on desktop web browsers. Tested on chrome, firefox, safari, edge and mobile Safari.

■ As of 3/29, email verification works properly on all email accounts now. Issue from Sprint 1-5 is resolved.

■ There is now an option to show that the user is logged in. However, it would be nice to click the username on the top right-hand corner which presents a drop-down menu showing to logout.

■ As of 3/29, logging in redirects users to the game.

■ As of 3/29, a successful account creation message still appears properly.

■ As of 3/29, receiving verification email to an iCloud email account sends a valid link. Issue from Sprint 1-5 is resolved.

○ Website Design Issues:

■ Clicking “login” or “register” should be hyperlinked to their corresponding webpages. This needs to be done before project completion.

* Log out option needs to be more visible for users and not buried in the user account page.
* Leaderboard needs to be connected and updated properly with new scores.
* Need to give users a way to change email addresses linked to the account.
* Changing email addresses in the user profile page needs to send out a new email verification code.
* Leaderboard Functionality (NEW)
  + New implementations of personalized scores are on all user profile pages now.
  + (3/29) Leaderboard is pulling and posting scores properly.
  + Terminology of the leaderboard page needs to be tweaked.
  + Need to consider hiding real names of the players and only use the alias, or consider it an “opt in” feature.

● Game functionality

○ Updated build still functioning properly on the demo page of the website.

■ Object collision works in editor.

* As of 3/29, “Start wave” button works as intended.
* As of 3/29, Music works as intended.
* As of 3/29, we need a pause/landing screen button with the new UI.
* As of 3/29, the settings button on the landing screen work properly.
* Quit button does not work, regardless if “maximize on play” is selected or not.
* As of 3/29, volume changing UI works as intended.
* As of 3/29, scene changing UI works as intended.
* New game and new world generation is functional, new maps, asset locations and collisions are all working as intended.
* Tower projectile animation and function are working as intended, sound still needs to be decided on.
* (3/29) Tower upgrade system needs to be implemented.
* (3/29) Every enemy now has health bars that properly adjust to damage given by towers.
* (3/29) Tower sounds being implemented as of testing, still need to be confirmed and tested across multiple maps and with multiple towers.
* Tower and main structure health now more visible and easier to discern.
* Enemy animations are working as intended.
* Tower tracking animations working as intended.
* Visual indicators for towers and attack ranges still need to be finalized.
* (3/29) Wave functionality is up and running as intended.
* (3/29) Game over function and score posting works as intended.
* Mobile controls are still working as intended.
* (3/29) Audio needs to go through more thorough testing to make sure sounds don't overlap and portray proper information through to the player without being blocked or muddled.
* (3/29) Sound options and volume tweaks need to be more thoroughly tested.
* (3/29) AOE tap mechanic working as intended
* (3/29) Wave spawn button glitch fixed
* (3/29) Enemies remaining counter now working properly

● UI/UX functionality

○ Gear icon implemented in the UI which brings up the pause menu, working as intended.

* (3/29) Resource management bar is being updated as intended using intended resources on every newly generated map.
* New UI graphics have been implemented across the board and is working as intended.
* (3/29) Enemy health bars seem to not obstruct the screen too much. Need to continue testing with more enemies on screen and with more towers and animations to make sure everything is updating properly as waves progress.
* (3/29) Tower sounds need to be tested to make sure sounds don't overlap or override each other and clutter the soundspace.
* (3/29) New menu and setting gear icons are implemented and working as intended

○ As of 3/29, clicking “new game” starts a scene and a sound plays. This is working as intended.