

## BCIT COMP 2930

### A Partial Testing Checklist for Web and Desktop Applications

**Include this document with your final code submission and make sure you indicate how you have tested your code!**

Team number: 11	Date: 2019-05-22
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#### MANDATORY BARE MINIMUM FOR ALL WEB APPS

- ✓ **Application crashes or unavailable pages should be redirected to an interesting error page.**  
We have a 404 page for when the page is down.
- ✓ **Check text on all pages for spelling and grammatical errors.**  
Looks good. Each team member checked the website and the game text.
- ✓ **Ensure your font size(s), style(s) and colour(s) for headlines, descriptions, labels, etc., info is consistent.**  
All style choices and info is consistent to intended looks and values. Each team member checked both the game and the website.  
**Check all pages for broken images.**  
Each team member checked for broken images, none found
- ✓ **Check all pages for broken links.**  
Each team member checked for broken links, none found
- ✓ **Check email header and footer for app logo, privacy policy, attribution, etc.**  
We do not have email links on our website
- ✓ **Check if app load time is within acceptable range.**  
App load time and scene changes is within acceptable range, each user checked the game and the website responsiveness
- ✓ **Every group member should use the app at the same time. Give it a workout!**  
  
Each team member used the app and it worked to acceptable standards. Game is smooth on mobile and desktop.

#### MANDATORY BARE MINIMUM FOR ALL GOOD APPS

- ✓ **Are mandatory fields indicated by an asterisk (or something like that)? Are they validated?**  
N/A - Name input field for high scores is mandatory and always filled in.
- ✓ **Are validation error messages easy to read and understand? Are they in a consistent position, colour, and style?**  
N/A - No validation error messages available

- ✓ **Are general confirmation messages easy to understand and displayed using same colour and style?**  
N/A - No general confirmation messages available for our game.
- ✓ **Are tool tips text helpful and meaningful?**  
N/A - No tooltips available in current build of our game.
- ✓ **Do dropdown fields have first entry as blank or text like "Select"?**  
N/A - No dropdown fields available within our game.
- ✓ **If the user can delete things, should the delete functionality ask for confirmation?**  
N/A - No available things for user to delete, only the sell function available for turrets.  
User cannot delete his high score once submitted.
- ✓ **Select/Deselect All options should be provided if your app supports record add/delete/update functionality.**  
N/A - No select all/deselect all available
- ✓ **Are amount values displayed with correct currency symbols?**  
Yes each currency value has a representing symbol clearly displayed with it
- ✓ **Does your app have a reset button to set default values for all fields in your form(s)?**  
No forms available but the game can be reset and replayed
- ✓ **Are all numeric values formatted properly?**  
All numeric values were checked and formatted and displayed as intended
- ✓ **Do input fields check for max/min field values? How do you ensure that input values greater than specified max limit, etc., are not accepted or stored in database?**  
No input fields available other than name with set values
- ✓ **Remember to check all input fields for special characters.**  
No input fields available within our game / website
- ✓ **Remember that input field label names should be standard, i.e., field accepting user's first name should be labeled 'First Name'.**  
N/A - No user creation so this is not applicable.
- ✓ **Does your app timeout? When? Why? How can you avoid this?**  
N/A - Once the user downloads the game, he/she can play without internet connectivity.
- ✓ **Check if downloadable files are pointing to correct file paths.**  
Download link for our game on android is set to the correct path - All members checked.
- ✓ **Try to adhere to standard, simple conventions for naming resources, fields, etc.**  
Field names are all labeled with clear and concise labels and naming conventions
- ✓ **Validate markup for all web pages (validate HTML and CSS for syntax errors) to make sure it is compliant with the standards.**  
Validated through [html5.validator.nu](https://html5.validator.nu)
- ✓ **Run your JavaScript through code quality tools like JSHint and JSLint.**  
Cleaned in <https://codebeautify.org/>  
C# code cleaned using C# cleaner.
- ✓ **Test numeric input fields with non-numeric input values – does a proper validation message appear?**  
N/A - No numeric input fields available
- ✓ **Check for negative numbers if allowed for numeric fields.**  
N/A - No numeric fields available

- ✓ **Check amount fields with decimal number values.**  
N/A - No amount fields available
- ✓ **Test all buttons available on all pages.**  
All buttons work within our game and make sounds when clicked. Buttons on the website all redirect accordingly.  
**Should a user be able to submit the same page twice by pressing the submit button twice?**  
Submit button for high-scores links to another game scene when user is done, can not be clicked multiple times
- ✓ **Do you need to worry about divide by zero errors?**  
N/A - No dividing logic on the site or game
- ✓ **Are you trimming white space from user input?**  
N/A - No input with whitespace available

### GUI AND USABILITY TEST SCENARIOS

- ✓ **All fields on page, i.e., text boxes, radio options, dropdown lists, should be aligned properly.**  
No fields on webpage, all fields in game are aligned
- ✓ **Numeric values should be right justified unless specified otherwise.**  
All numeric values are right justified, unless otherwise specifically intended not to
- ✓ **Enough space should be provided between field labels, columns, rows, error messages, etc., so your app is easy to read.**  
All text and fields are easy to read/do not overlap and have enough room
- ✓ **Should you disable the scroll bar?**  
No the scrollbar is working as intended for the site.
- ✓ **Disabled fields should be greyed out and user should not be able to set a focus on these fields.**  
No, disabled fields available
- ✓ **Users should not be able to type in drop down select lists.**  
No drop downs available
- ✓ **Does it make sense for information filled in by users to remain intact when there is an error message on page submit?**  
No information available to be filled in by users
- ✓ **If so, can the user submit the form again by correcting the errors?**  
No, we have one feature that resembles a form in the game once you submit it is submitted onto the leaderboards.
- ✓ **Check if proper field labels and values are used in error messages.**  
No error messages available
- ✓ **Dropdown field values should be displayed in some meaningful sort order.**  
No dropdown fields available
- ✓ **Default radio button options should be pre-selected on page load.**  
No radio buttons available

- ✓ **Does your app need field-specific and/or page-level help messages?**  
No fields
- ✓ **Ensure appropriate fields are highlighted in case of errors.**  
No fields available to highlight
- ✓ **Ensure dropdown list options are legible and are not truncated due to any field size limits.**  
No drop down lists available
- ✓ **Confirmation messages should be displayed before performing any update or delete operation.**  
No update or delete option on website. N/A for game.
- ✓ **Do you have or need an hour glass or other app busy icon?**  
Not needed in our current webapp
- ✓ **Is page text left (or consistently) justified?**  
Page text is left aligned when intended

### TEST SCENARIOS FOR DEALING WITH EMAILS AND EMAIL ADDRESSES

- ✓ **Email addresses should be validated.**  
N/A, we do not utilize email addresses in our webpage or game.
- ✓ **Special characters in email body template should be handled properly.**  
N/A, we do not utilize email addresses in our webpage or game.
- ✓ **Do you need to worry about language-specific characters, i.e., Russian, Chinese or German language characters?**  
No, the only form of input is restricted to English based characters in our game.
- ✓ **If your app sends email, the email subject should not be blank.**  
N/A, does not send an email.
- ✓ **If your app sends email, the placeholder fields used in your email template should be replaced with actual values, i.e., first name and last name.**  
N/A, does not send an email.
- ✓ **Email sender name should not be blank (it should be your app, of course!).**  
N/A, does not send an email.
- ✓ **If your app sends email check your email in different email clients like Outlook, Gmail, Hotmail (so 90s), BCIT, etc.**  
N/A, does not send an email.
- ✓ **Check send email functionality to single, multiple or distribution list recipients.**  
N/A, does not send an email.
- ✓ **Check if reply to email address is correct.**  
N/A, does not send an email.

### PERFORMANCE TESTING TEST SCENARIOS

- ☐ **Check if app load time is manageable with slow connections.**  
Yes, we tested on a network with a low internet reception.
- ☐ **Check the responses time for any action under light, normal, and heavy load conditions.**

Response time was great, we had 5 different people running the web app and game and we did not see any effect in our performance.

- ☐ **Check performance of database stored procedures and triggers – is it sufficiently fast?**  
Leaderboards change sufficiently fast and update accordingly
- ☐ **Check database query execution time (especially with multiple users testing at once!).**  
Database query execution time is running as intended even with multiple users all at once. We tested this with all five members at once.

### ANYTHING ELSE?

- ☐ **Game ends when player loses life and correct scenes are displayed**  
When life reaches zero or less game ends and player is brought through end game scenes correctly
- ☐ **All enemies and towers working as intended with correct numbers and actions**  
Enemies and towers are working as intended and numbers and actions are correct after testing game.
- ☐ **Boss spawns at correct time**  
Boss spawns at correct time, game played through many times to test.
- ☐ **Random fact shown at end screen**  
A correct fact is randomly shown at the end screen, tested by playing through many times
- ☐ **Check for null references and errors**  
No errors found and all references set after multiple playthroughs