Master Test-Plan 1

# Introduction:

This test overview is designed to ensure the game is working properly as well accomplishes its goals to the intended target audience.

Goals & Objectives:

* Fully functional educational game that runs on platforms accessible to students.
* Goals: provide educational value to students who play it, to be engaging and educational
* Must be extensible so others can provide educational content

# References:

* [Project Proposal](file:///D:\data\Dropbox\HomeWork\Senior%20Project\SeniorProject\docs\Kamphaus_ProjectProposal.docx)
* [Requirements](file:///D:\data\Dropbox\HomeWork\Senior%20Project\SeniorProject\docs\Requirements.docx)

# Test Items:

* Unity Version 2019.2.3f1 Personal – IDE for creating the game as well as the engine to run the tests for the game.
* Microsoft Visual Studio Professional 2019 Version 16.2.3 – Programming IDE for C# scripts used in unity engine. Used to test code specific items and debugging.

# Features to be Tested:

* Levels
  + Accessibility of the levels and ability to gain access to all intended areas, and stay within intended boundaries.
  + Questions being able to be answered correctly and correctly display on the screen.
  + All content displaying on target screen sizes.
* Usability and Educational Value
  + How easily users can access the product
  + How much educational the game itself provides (not questions individually but game as a whole)
* Menus
  + All options provided working and displaying as intended
  + All levels are accessible from the menu in the manner intended
* Cross Platform Compatibility
  + Properly function in the same compacity for all platforms tested.
  + Platforms to be tested:
    - Windows 8 and later
    - Android OS.
  + Display of targeted devices properly show up.
* Features Not to Be Tested:
  + The Educational value of the questions themselves and content specific
    - The goal of the game is to provide a platform for educational environment that education providers can upload content to for students to use to learn while playing the game. The focus is how the game can facilitate the educational environment but not the educational content included in the game demo.
  + Quality of the questions
    - The intention is not how well students can answer the questions themselves, as the intention is for others to supply the content, but how the questions themselves are presented and interfaced for the best delivery of the educational content.

# Approach

* Testing will be broken into two categories.
  + Functionality- Features that are part of the core functionality of the game, that must work the intended way to ensure the game is usable and facilitates the intended goals
  + User Playability – Features that are more subjective the target users and quality of life that may need to be changed or adjusted base off of feedback from the players.
* Functionality Method of testing
  + Functionality will be tested on a pass, fail Criteria where specific parameters must be met to determine if they meet the requirements.
  + Features that are independent of device screen size or platform will be tested on a standard device.

# Item Pass/Fail Criteria

* Levels
  + Pass Criteria: Must be able to bring character from beginning to end on each level.
  + Fail Criteria: If player gets stuck, falls out of bounds, or otherwise unable to access the entire level.
* Usability
  + Pass: Majority of players (more than half) are able to understand controls and require little to no assistance during play testing.
  + Fail: Majority of play testers find themselves unable to navigate through the game without major assistance during gameplay.
* Menus
  + Pass: All options on menu items fully load, without crashing and will load the level that is selected
  + Fail: Any option does not do as it is labeled, stuck in a menu and unable to load level.
* Cross Platform Compatibility
  + Each Platform tested will have the same pass-fail criteria
  + Pass: The game displays properly and controls function the same across all platforms
  + Fail: The platform behaves differently than intended.

# Test Deliverables

* Test Plan
* Test Case
* Test Reports

# Test environment

* Windows 10 MSI Laptop i5 Intel 8th gen,
* Most Recent build of project will be run on laptop

# Schedule

* Jan 15th test levels accessibility
  + Resolve issues if present by Jan 31st
* Jan 31st Test menu accessibility
  + Resolve issues if present by Feb10th
* Feb 10th test multiplatform
  + Resolve issues as necessary by March1st
* March 2nd – 10th Begin player testing trials with volunteers.
  + May need to evaluate if additional data is necessary. If feedback dictates a feature must be changed, have done by 15th then recommence testing with the new features
  + If necessary additional trials after 15th for changed features
* April 1st Compile all findings from testing
* April 10th All errors should be fixed and game should be about completely finished.

# Training Needs:

* Users may need to be trained on basic controls of the game during testing. If more training is needed during testing, in-game instructions will be considered to be added.

# Responsibilities:

* Developer: Derrick Kamphaus will be responsible for implementing the testing, and distributing for player testing.
* Players: responsible for providing feedback during game play. Fill out a questionnaire after playing through.

# Risks:

* During play testing players may feel like they have to keep playing or testing the entire time
  + Inform players at any point they are able to end testing at any point if they feel the need to.

# Assumptions and Dependencies:

* All features have been completed to full extend prior to testing
* Group play trials depend on having subjects to cooperate

## Approvals:

* Project Advisor: Dr. Sean Hayes:

Signature

Date