Testing Report for AstroQuiz

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Introduction

This document will include the testing plan and report for the video game “AstroQuiz”. To fulfill its purpose as an educational media, “AstroQuiz” is required to have players navigate a spaceship through an asteroid field by dodging or shooting asteroids, and answering the educational pop-up questions to achieve the highest score possible. Therefore, the game must also save the amount of correct answers to show the player's educational progress.

The purpose of the testing plan and report is to ensure the quality, functionality, and reliability of “AstroQuiz”. Through a structured and systematic approach to testing, we aim to identify and address any issues, bugs, or inconsistencies that may impact the player experience negatively. The testing plan outlines the specific objectives, methods, and test cases designed to thoroughly evaluate all aspects of the game, from gameplay mechanics to graphical performance and user interface responsiveness. The testing report, on the other hand, serves as a comprehensive documentation of the testing process, detailing the test results, identified issues, recommendations for improvements, and overall readiness of the game for release. By conducting thorough testing and documenting the findings, we can enhance the overall quality and ensure a smooth and enjoyable gaming experience for our players.

Testing Objectives

The goal of the testing phase is to ensure that this game will provide a seamless and intuitive experience for players. It will feature a functioning main menu that serves as the central hub for accessing various functionalities. From the main menu, users will have options to initiate gameplay, modify questions, adjust settings according to their preferences, and view the high scores achieved by other players. The player’s movement will correspond with the specific key that is pressed, asteroids will be constantly moving across the screen, asteroids will be destroyed when hit by laser blasts, and the player’s ship will be destroyed when hit by an asteroid.

Test Cases

The testing for the project was conducted by our testing team and consisted of searching for defects or errors while using the program. Several errors were found and corrected as well as a few errors that we were unable to find a solution to prior to the due date for this program.

Known problems include a collision issue with fast moving asteroids and the ship. Collision can sometimes occur before it appears that it should happen. Chances of this happening are minimized by reducing ship speed. Another error that happens is that the game can become stuck; When the player holds or clicks more than one key at the same time the game will stay that way and disregard user input. For example moving the ship and holding down the laser button will cause the game to stop accepting new user input. The only sure way to avoid this is to not hold down keys.

During testing a problem discovered was with the ability to change the type of ship you were using for the game. Even though the setting was changed inside the settings page it was not reflecting on the game. After some searching for the code a solution was found by updating the ship which then reflected the change in the settings.

Another problem that was discovered involved changing the questions on the edit questions screen. When changing the question data in some fields the changes were not being reflected correctly. Simple changes to the way the saved data was displayed resulted in a solution to this problem.

Test Results

Overall, issues with the game were minimal with little impact to functionality of the game. If there was more time available for the development of this program we would like to add more features in the settings to create a more user friendly experience as well as providing different assets for sound and images. In the future, a different language would be chosen for our game in order to improve performance as Python lacked control over certain aspects of the game. We are satisfied with our product and would likely follow the same or similar course next time with exception to the language we developed in.