CSCI 3308 - Project Part 1

Who

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Title

Bit-Man!

Description

Bit-Man! is a virtual reality arcade-style maze game using Google Cardboard, a mobile Android device, and the Unity development kit. The user will play the part of Bit-Man, whose objective is to travel through a maze collecting “bits” and avoiding “viruses”.

Vision Statement

Bit-Man! is a thrilling first-person maze game that takes users on a unique virtual reality adventure.

Motivation

Virtual reality is a new cutting-edge platform in the technological world. It is a new frontier in gaming and mobile app design. As this new platform becomes more prominent, products in this field will be in higher demand. Our group wants to dabble in this new form of technology in hopes that it becomes something popular within the near future.

Risks

- New work environment: Unity is not familiar to most team members.
- New Language: Unknown to all team members.

- Google Cardboard: This platform is also something unfamiliar to the team.

Mitigations

- One member is willing to bring other members up to speed. The internet is also a valuable resource, as Unity also provides their own tutorials.
- The language can be learned similarly to those already known, and makes for great practice for work environment adaptation.
- Google cardboard is a simple platform and is applicable to many products ideas, since it is designed to be an independent project platform.

VCS

We intend on using GitHub as a repository for our project. Here's the link: https://github.com/PeterTranHuynh/CSCI3308_Bit-Man

Requirements

ID	Description	Priority
USER_1	As the player, I want to wear the Google cardboard and press the button on the side to start the game.	High
USER_2	As the player, I want to be able to look around the game world by moving my head around.	High
USER_3	As the player, I want to look down in the game and press the side button to quit the game.	Medium
USER_4	As the player, I want to move forward in the game by looking in that location.	Medium
USER_5	As the player, I want to pick up "bits" to increase my score.	Low
FUNC_1	Move the game camera turn as the user moves the Android device's accelerometer.	High

FUNC_2	Have the player camera move forward in the game world wherever the player looks.	Medium
FUNC_3	End the game if the player touches a “virus” or looks down and presses the side button.	Medium
FUNC_4	Increase the player score if the player comes in contact with a “bit”	Low
NONF_1	Portable Platform: This game should be able to run on any Android device with an accelerometer, even without the Google Cardboard VR headset.	Medium
NONF_2	Performance: The game should be visually appealing and run without any latency or issues.	Medium

Methodology

We plan to use the Iterative Waterfall methodology on this project. This method allows our group to create a small product with tangible goals, then move onto larger stretch goals as we iterate through the development process. We can add on features and allow the game to grow based on our capabilities through each iteration. By the end of every iteration, we hope to have a functional version of Bit-Man! with better features than the previous version.

Our methodology can be seen through our Trello project tracking software labels: green signifies a design stage event, yellow an implementation stage event, and orange an analysis stage event. Different iterations will also have different label colors as well.

Project Tracking Software

We plan to use Trello as our online project tracking software. Here’s our board link: https://trello.com/b/yZU5SD4M/bit-man.

Project Plan: