Alzheimer’s Awareness Crypto Game

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Project Overview and Mission

Alzheimer’s Awareness Crypto Game will be a video game application that brings awareness to Alzheimer's disease and Dementia. In association with the Non-Profit Alzheimer's Association, this application will help generate recognition and funds to support their cause and achieve their goals. The Alzheimer’s Association was founded by Jerome H. Stone and several other family members in Chicago, Illinois on April 10, 1980. Their mission is to lead the way to end Alzheimer’s and Dementia, which has no known cure.With our application, it will be able to bring more awareness to the disease and the Alzheimer’s Association, helping them achieve their mission.

Scope of the Product

This application will consist of three main scenarios in which the video game player will interact with. These are the Alzheimer’s Simulation Game, Alzheimer’s Learning Mode, and Cryptocurrency Mining Mode.

Simulation Game

When the player initiates this section, they will be greeted with the general controls of the game. After they are familiarized with the layout, they will be tasked to do various normal actions that are very challenging for a person with Alzheimer’s. These can include but are not limited to making a bowl of cereal, brushing your teeth, or putting on clothes. The main purpose of this game is to show the player how difficult and challenging it is to do normal activities when you are diagnosed with Alzheimer’s Disease or Dementia.

Learning Mode

When the Learning Mode is accessed, it will display different sections where the user can click, such as “What is Alzheimer’s?”, “How to support someone with Alzheimer’s?”, etc. Moreover, it will also host various scholarly articles and papers about Alzheimer’s and Dementia. Additionally, this will also hold information about the Alzheimer’s Association and their mission. This also includes the latest research and new findings into Alzheimer’s Disease and Dementia.

Cryptocurrency Mining Mode

Upon entering this mode, the player will be greeted with important information regarding the mining of cryptocurrency and that all funds generated will be donated to the Alzheimer’s Association. Moreover, this mode will run in the background allowing the user to access the other different modes. Since generating cryptocurrency is very taxing regarding electricity use, the player can opt out of this mode and their machine will not be used to generate cryptocurrency.

Final System Design

The System Design of Alzheimer's Awareness Crypto Game will use a Model-View-Controller (MVC) system architecture with a Singleton and Composite Design Pattern. This is most fitting due to the main functionality of the application is a Game where only one instance of classes is needed. Moreover, there will be three main subsystems for this application, each being associated with each mode of the application (Simulation Mode, Learning Mode, and Mining Mode).

For the development of this project, using a Game Engine such as Unreal Engine or Godot will be the most beneficial for the developers to eliminate the technical setup and focus on the main implementation of the application. As a result, the programming language will be dependent on the Game Engine the team chooses, so it's best to consider what the team members are the most comfortable with.

Potential UI Design and Game Scenario

From the System Design, the Figure 1 below is a potential User Interface of the application that can be implemented. As shown, from the Title Screen, the user can navigate to all three modes of the application. The Cryptocurrency Miner Mode is mainly a popup to confirm the start of the process and the Learning Mode is functionally a website that will retrieve the articles and research from a Database or API that holds all that information.

The Main Mode, Simulation Mode, will place the user in a location (e.g. Grocery Store) to then be prompted to complete various tasks (e.g. Collect Soup). Throughout the time playing, the game logic will do various changes to the Game Environment or the User Inventory (e.g. Change placement of items) to simulate a person with Alzheimer's or Dementia. Upon successful implementation of this application, we hope it will bring more awareness to Alzheimer's and the Alzheimer's Association to help them achieve their mission.

Figure 1 - User Interface Design