

Game Design Document

Hope's Echo

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1 Overview

Em 'Hope's Echo', players immerse themselves in a compelling post-apocalyptic world, where the last survivors of humanity cling to hope against all odds. In a backdrop of desolate landscapes and ruined cities overrun by nature, a glimmer of optimism emerges. Hope becomes a powerful force that inspires players to overcome obstacles and make decisions resonating with the promise of a better tomorrow. The environment underscores the fragility of hope, but also its enduring power even in the darkest circumstances, making it a central and emotionally impactful element of the gaming experience. Players will have to solve puzzles they encounter on their journey and discover a cure for the deadly virus that nearly extinguishes humanity.

1.1 Description

Hope's Echo" is a captivating point-and-click puzzle adventure designed for players who enjoy the intricacies of challenging adventure games, intricate puzzle-solving, and an immersive narrative experience. Tailored for teenagers and young adults, this single-player game combines the thrill of exploration with the satisfaction of solving puzzles through a point-and-click interface, ensuring an engaging and thought-provoking gaming experience. Embark on a journey where every click brings you closer to unraveling the mysteries within the game's rich narrative, incorporating additional elements of drag and drop interaction to enhance the overall gaming immersion.

The game is set in a world ravaged by a lethal virus that threatens the extinction of humanity, the player takes on the role of a brave surviving scientist. Equipped with an experimental time machine, your mission is to travel between three distinct timelines: the post-apocalyptic present, the past during the start of the pandemic and the past before the devastation. The player's quest is to unlock the secrets of the virus, find a cure, and prevent total destruction. As the player explores desolate landscapes and cities taken by nature, hope emerges as their only ally on the journey.

The game features 2D graphics with rich, atmospheric details. Timelines are visually represented by differences in environmental conditions, creating a contrast between the post-apocalyptic present and the more vibrant past. The aesthetic combines dark elements with moments of beauty and hope to reflect the duality of the theme.

The game's environment varies depending on the timeline. With the "Present" timeline the environment varies between abandoned cities and natural areas in a state of decay. Ruined buildings, lush forests, and secret laboratories play a key role in the game's exploration. The scenario serves to highlight humanity's fight against extinction and the force of nature in recapturing the world. The "Past" timelines, depending on if it is set during the early stages of the pandemic, the environment is one of empty cities, where we can see, that people have started to isolate themselves out of fear of being infected with the virus and where animals can already be seen roaming naturally in the cities. As well as closed public buildings and secret laboratories with a high-level security, or if it is set before the start of the pandemic, the environment is one of cities full of people, living their mundane lives, with public buildings open and busy.

1.2 Key features

Being able to travel between 3 different timelines to solve puzzles.

An adventure puzzle game with the goal of obtaining a cure for a deadly virus from the past.

A hint system will be available to help players who are having trouble solving the puzzles.

2 Game Structure

2.1 Technical Specification

“Hope’s Echo” is a single-player game that will be developed for three platforms: Mac, Windows, and Android.

2.2 Control

The player experiences the game as a surviving scientist, through a third-person representation in 2D scenarios. The player will have pre-defined scenarios that they can explore to move forward in the game.

The game is organized into scenes, each with 3 different puzzles, which correspond to the different phases of the game. The player progresses in the game by completing puzzles and finishing the game's scenes. The puzzles consist of exploring the scene in search of items, deciphering riddles, and discovering how to avoid being discovered when in restricted areas. To do this, the player will be able to travel between the past and the future, to progress in the game.

The game is divided into three timelines, with the Present being the post-apocalyptic world where the player starts the game. In this timeline there is not much life, other than plant life that appeared in places that were inhabited by humans in the past. The other timeline is the Past during the deadly virus pandemic (called Past1). In this timeline there will also not be much presence of human beings, but there will be more than in the present, and there will still be no vegetation in the cities, as in the present. And finally, the Past before the deadly virus pandemic (called Past2). In this timeline there would be a lot of movement of human beings on the streets, showing that nothing had happened and that everything was normal.

3 Hope's Echo Interface

3.1 Interface

The game interface is divided into 3 areas, the upper area, the middle area, and the lower area.

3.1.1 Upper area

This area will be responsible for showing the dialogues between the characters, or even the main character's thoughts, and will also be where the tips will be shown.

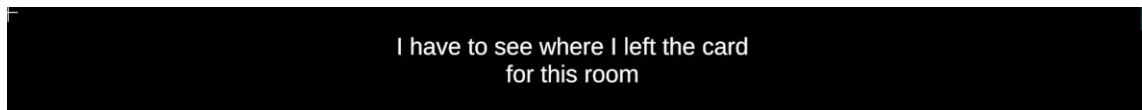


Figure 1 - Upper area

3.1.2 Middle area

This area is where the scenes from the game in question are shown, it is where the player will interact with the scenery to move around and with the objects/characters.

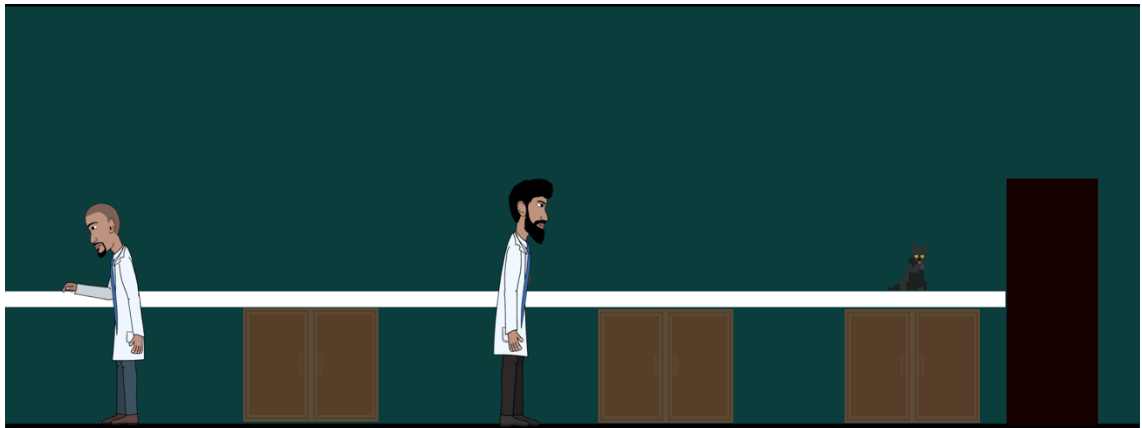


Figure 2 - Middle area

3.1.3 Lower area

This area will be responsible for storing the items that the player will currently have to use, serving as a constantly open inventory so the player can interact with the items they have stored at any time

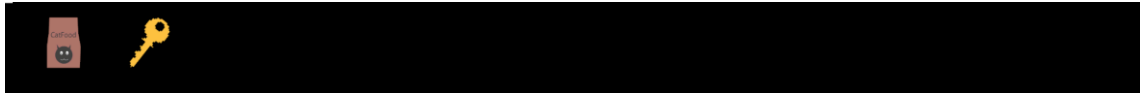


Figure 3 - Lower area

3.2 Actions

3.2.1 Movement

The player can move between various scenarios. The player's movement is very simple, just click on the area the player wants to move to and the character will go to the desired location.

3.2.2 Pick-up/drop:

The player will have to collect certain items to proceed in the game. To pick up the item, it is the same way as when moving, you just need to click on the screen at the location of the item and the character will move to the location of the item, if it is not nearby, and save it in your inventory.

If you pick up an item, you can't put it down, the item will be needed to solve the puzzle, if the item is no longer needed to complete the remaining puzzles, it will disappear from your inventory.

3.2.3 Perception

The player will know which objects he can interact with, as his cursor will change shape when passing over an inedible object.



Figure 4 - Normal mouse

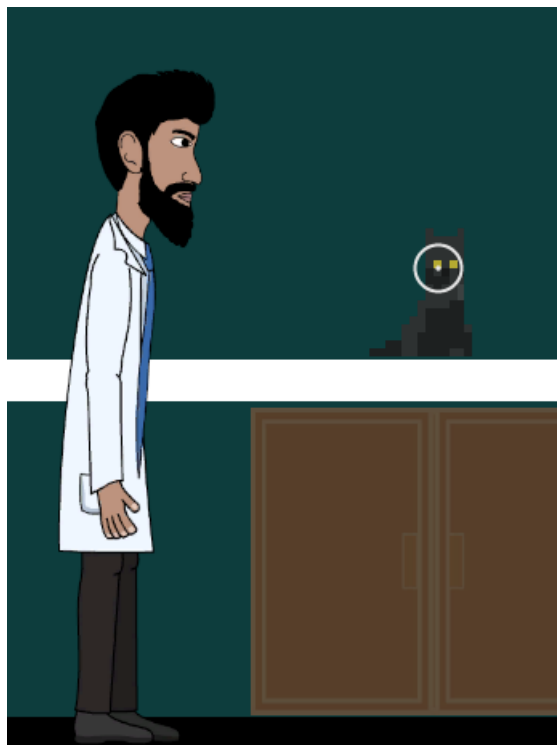


Figure 5 - Mouse with interaction indicator

3.2.4 Hints

In the upcoming features of "Hope's Echo," we are excited to introduce a dynamic hint system designed to enhance the gaming experience. To assist players facing challenging puzzles, the game will offer a hint system with a total of three hints available. These hints are strategically designed to gradually guide players toward solving the puzzle without giving away too much at once.

Located in the top right corner of the screen, the hint system will remain disabled initially, promoting an immersive and independent puzzle-solving experience. However, recognizing the importance of balancing challenge and guidance, the system will activate after the first 4 minutes of gameplay without puzzle resolution. The first hint will then appear, providing valuable insights into the puzzle.

As time progresses, an additional two hints will follow, appearing within the subsequent 3 minutes. This design ensures that players have a total of 10 minutes to decide whether to utilize the hints, empowering them with the flexibility to choose when and if they seek assistance.

To cater to different player preferences, the game grants players the autonomy to decide whether to access the hints. This feature not only respects the desire of some players to tackle puzzles independently but also accommodates those who may appreciate a helping hand along the way.

With this thoughtful implementation, "Hope's Echo" aims to strike a perfect balance between challenge and support, providing an inclusive and enjoyable gaming experience for all players.

4 Art

4.1 Player and NPCs

The player and other NPCs were taken from a pack available online at the unity assets store, belonging to the author **SR Studios Kerala**. This pack brings 3 doctors (as necessary to incorporate into the game) and I chose which one would be the player and the other two the NPCs, and due to the lack of variety, the NPCs are repeated throughout the game, to give more population in locations, such as in laboratories.



Figure 6 - Player



Figure 7 - NPC 1



Figure 8 - NPC 2

4.2 Scenario

4.2.1 First scene

For the first scene of the game, the environment tries to look like a scientific laboratory with dark tones around it, to show the player a feeling of a dimly lit environment or even a more underground environment, and also with a lack of variation in elements on the screen. , to give a feeling that there are not many resources available and that each object is very important for the characters in the game.

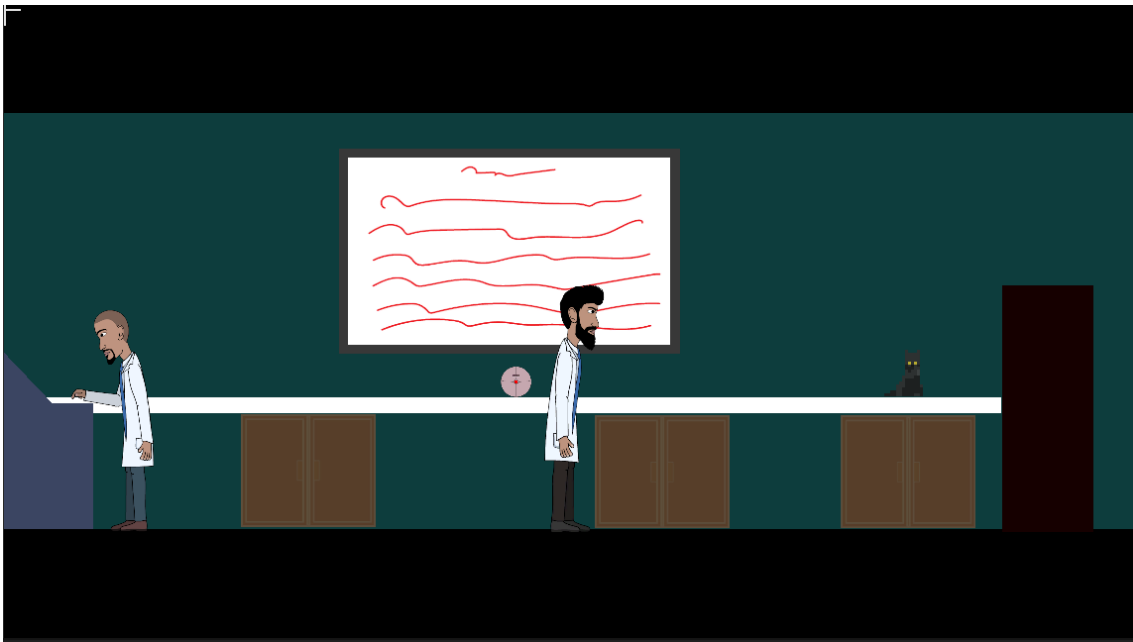


Figure 9 - First scenario

4.2.2 Second scene

For the second scene of the game, the game will already present a scene with lighter colors and more objects spread across the scene, since in this scene the player will now be able to travel between the present and the past 1. And in the past 1 it will also present more people walking around the scenes, showing that at that time life still existed and that humanity had not yet almost become extinct.

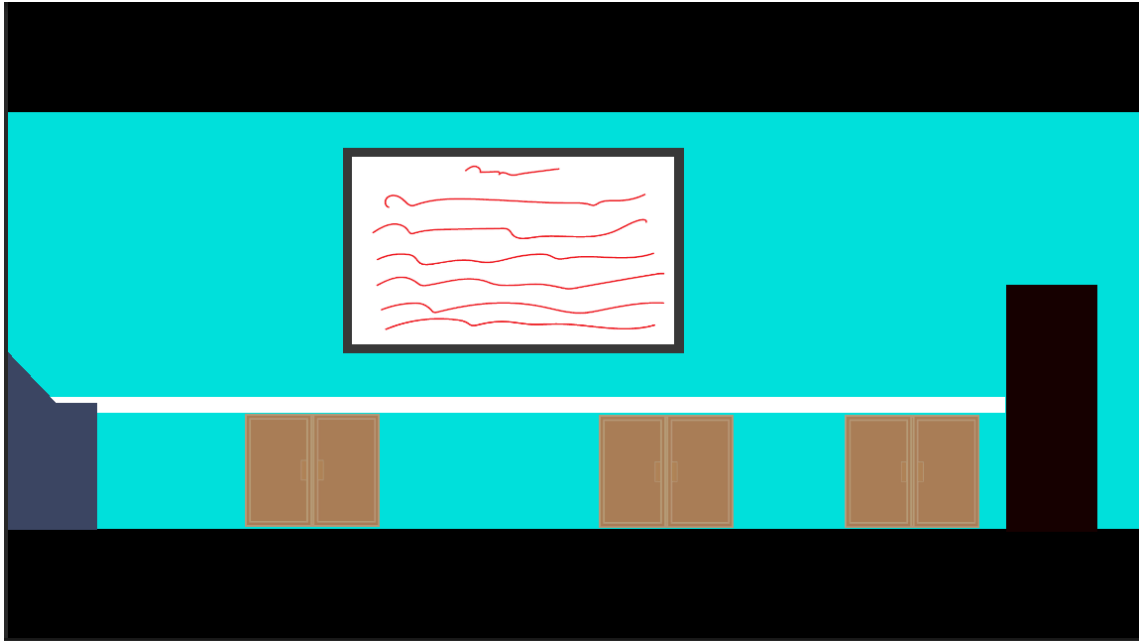


Figure 10 - Second scenario

4.3 Scenario elements

When creating the scene elements, a package called 2D Neighborhood, created by **Afnan Mahin**, was used to furnish the rooms:

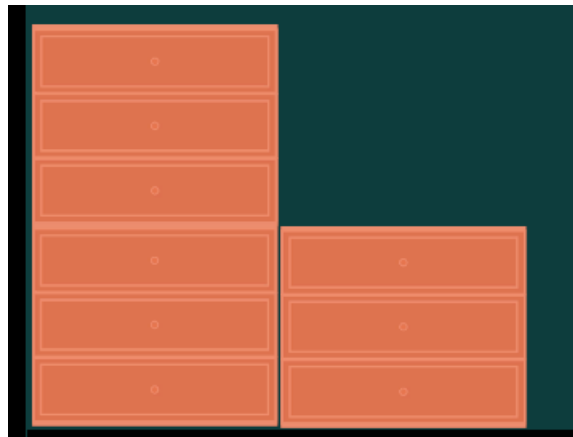


Figure 11 - cabinets



Figure 12 - Bookcases

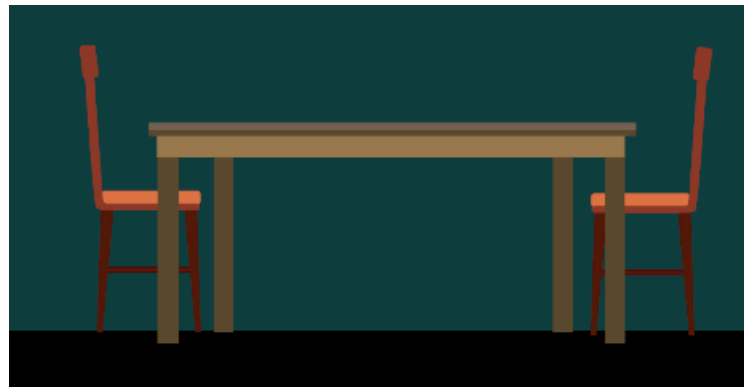


Figure 13 - table and chairs

And Pet Cats Pixel Art Pack, created by **Luiz Melo**, to add a cat to the game:



Figure 14 - Cat

Furthermore, the other elements were created specifically for the game, such as the board and the computer in the starting room.

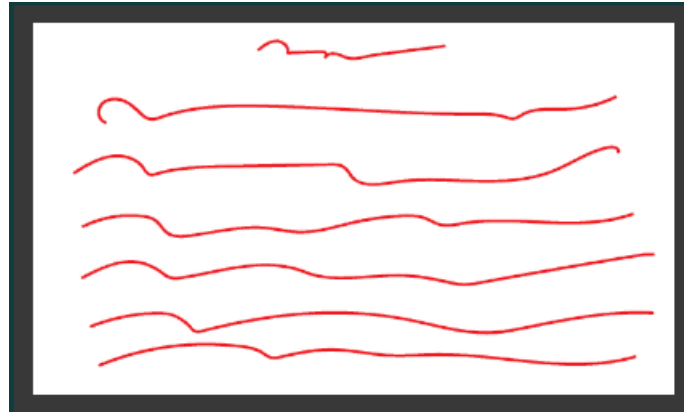


Figure 15 - White board



Figure 16 - Computer

4.4 Items

Regarding the items with which the player can interact, we chose to create these elements entirely from scratch. This is because these items were more crucial to the game, thereby imparting a more personalized touch to the scenes and puzzles that were being created.

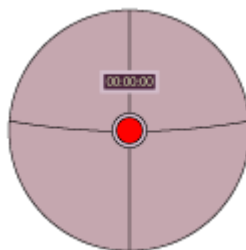


Figure 17 - Time machine

5 Sounds

In terms of audio elements, it is noteworthy that all of them were sourced from the Pixabay website, which offers free resources. These sounds are seamlessly integrated into the gameplay experience, enhancing the auditory feedback as the player navigates the environment, hearing the character's footsteps. Furthermore, when interacting with the in-game cat, a distinctive meowing sound is incorporated.

6 Functional and non-functional requirements

6.1 First Prototype

- The game must offer detailed and atmospheric 2D graphics that effectively represent the different timelines and environments, emphasizing the duality of the theme.
- The game's visual style must be kept consistent across different timelines so that players can clearly identify where they are.

6.2 Final Prototype

- Be compatible with Windows, Mac and Android;
- Have challenging puzzles for the player, such as exploring the map, understanding riddles and other types of puzzles;
- Give a narrative to the game;
- The game must offer intuitive controls for players on all platforms (keyboard/mouse for Mac and Windows, touch controls for Android).
- There should be a hint system that provides up to three levels of hints for puzzles, triggered automatically after certain periods of time to avoid player frustration.
- Do not have a long loading time between transitions

7 References

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