

Game Development Design Document

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Game Idea

Idea Description

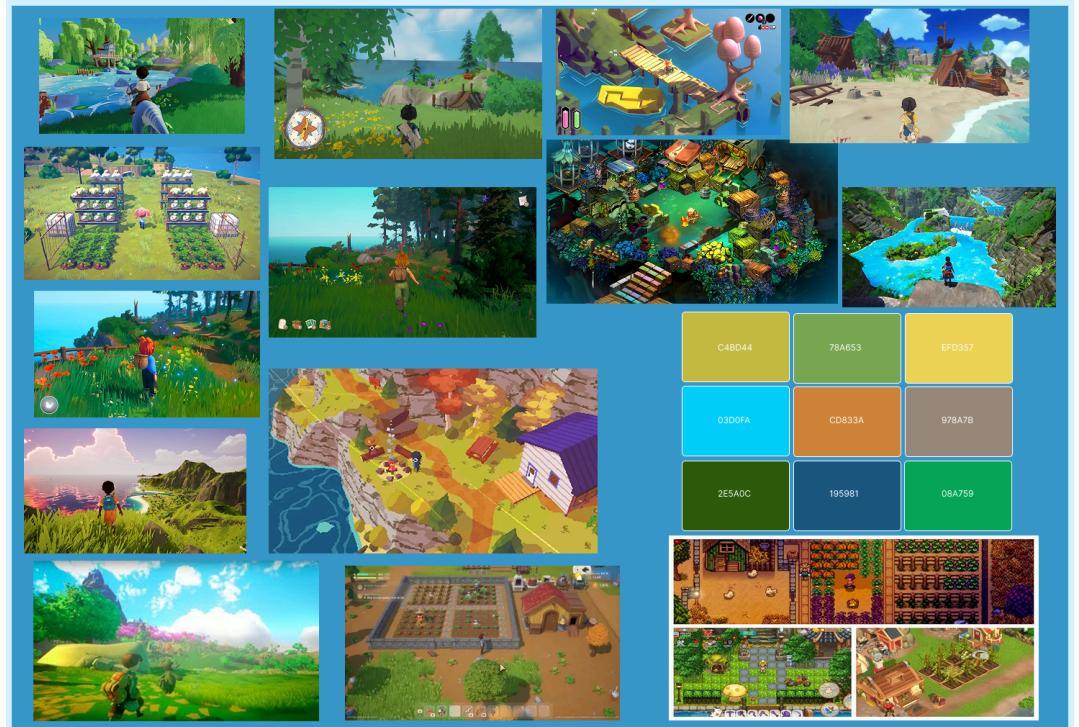
My idea for this game is for it to be a semi relaxing adventure game where the player explores the world collecting flowers, vegetation, materials and many more things to bring back to their home. They can plant or store away whatever they find on their adventures. The player can look to sell some items they collect or keep them and display them, They may even be lucky enough to find some secrets hidden around the lands..

Mechanics

For mechanics I would like to have a collecting mechanic so players can pick up the things they find, along with that an inventory mechanic the player can look through and see what they have found. A smooth and easy to use movement system with jumping and sprint. A planting system for the flowers and vegetation the player collects. I would like to implement a selling system if possible to add a bigger game loop.

Moodboards and Inspirations

On the next page you will see moodboards created for this game idea for game inspirations. These are games that share a similar colour scheme and environment design that I would like to replicate in my project . The secondary moodboard shows off the Environmental and mechanics inspirations for my projects. I will use these to help develop my game and use these examples to help me define and develop my mechanics.



Project Plan

For this project I've created a Trello board and a project plan in excel to help me keep myself on track and remind me of what I need to work on and what I need to create. It also helps me delegate tasks to different weeks. These plans will help me layout Design, Development, Testing and Refinement in an easy to understand way.

<https://trello.com/b/8GshUInJ/gamedevelopmentboard>

Requirements Analysis

Functional

Game Level: A vast open level design with a centralised “base of operations” style starting area that the player will return to on many occasions. Bits of the map having different elevations and environment prefabs to change gameplay speed. The level will have to be populated with many environment assets and interactables.

Movement: The movement system will be a 8 way directional movement system using the standard keyboard and mouse controls, WASD for moving, Spacebar for jumping and the player will be able to rotate and move the camera with the mouse. Allowing the player to move the camera plays into the nature of the game I want to make.

Interactables & Triggers: The main mechanics of my game will be the players ability to collect and pick up items like flowers and crystals, storing them in their inventory. This will be an essential mechanic as later mechanics like the planting system will rely on this system to operate. There will also be some interactable items to harvest and the items fall on the floor. There will be things like boxes and logs with physics that the player can nudge and move around.

Planting & storing: The second essential mechanic to the game is the planting system allowing the player to return to their starting area and plant the different flowers and vegetation they find on their travels, relying on an operational collection system. For this I would like to get stages of planting like seeds to blooming to full size but as a Functional requirement that is not fully necessary.

Functional UI: As the main game loop requires the planting and collection systems, the player must be able to see what they have in their inventory, with a little description of what the item is and the amount the player has collected. The basic functional UI would be a Inventory screen showing each item, The items would only show in the UI when the player collects one of that item

Non-functional

Audio Design and Cues: Audio & Cues are an important part to many games and are an integral part to a player experience in the long run. They play a big part in accessibility as well allowing more players to play and experience the game.

Selling System: The selling system would be a backend system in my game where the player could sell off items they find. Not necessary to the gameplay but an idea for future development

Camera Movement: The moving of the camera is a helpful edition for the player letting them move it around to see other areas they may not have seen before.

Non Functional UI: The ability for the player to pause or rearrange the items in their inventory are additions that could be made but are not vital.

Cutscenes: An opening cutscene to show the world of the game or a cutscene to play when they interact with an item or plant an item.

Item Dropping: Item dropping would be a helpful edition as the player has a max inventory so if they collect too much of something they can easily drop it to make room for other things.

Accessibility Requirements



The game I have decided to analyse as part of the Accessibility requirements is The Last of Us 2. I have chosen this game as it is known for having good accessibility presets in the game.

Visual

One of the most helpful accessibility requirements present in TLOU2 is the vision accessibility preset. These settings allow the player to change a multitude of things. Enlarge UIs, auto lock to enemies, traversal and combat audio cues, detailed puzzle skipping and text to speech. All these options allow for a large amount of accessibility to restricted individuals, as the developers have been able to find a balance between accessibility and removing mechanics in the game.

Audio

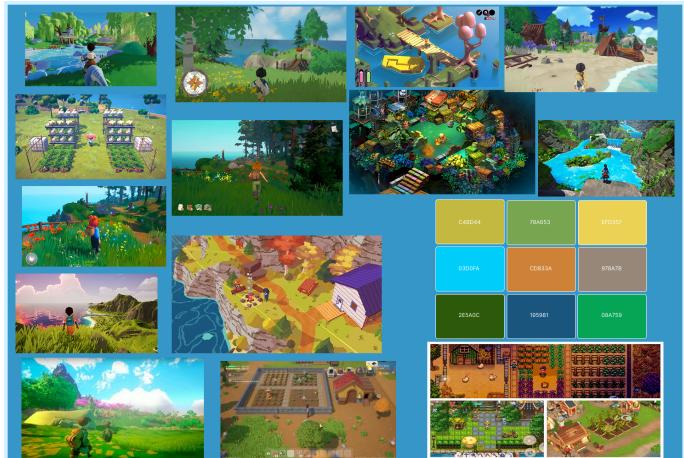
TLOU2 has a number of audio settings, for example there are awareness indicators making audio cues, pick up audio cues and notifications, dodge prompts, combat vibration cues, subtitle directions and names. All these elements help audibly restricted players to have a better experience when playing. I look to integrate some visual cues to help audio restricted players with text prompts

Motor

The availability for the motor accessibility shares some settings with the visual accessibility settings. Settings like auto lock on to enemies and puzzle skipping however the motor settings also add a lot more like auto item pick up holding buttons for melee combos, weapon sway can be turned off and camera assist to name a few. All these settings help make a game easier and more accessible, I look to try and implement these however I can.

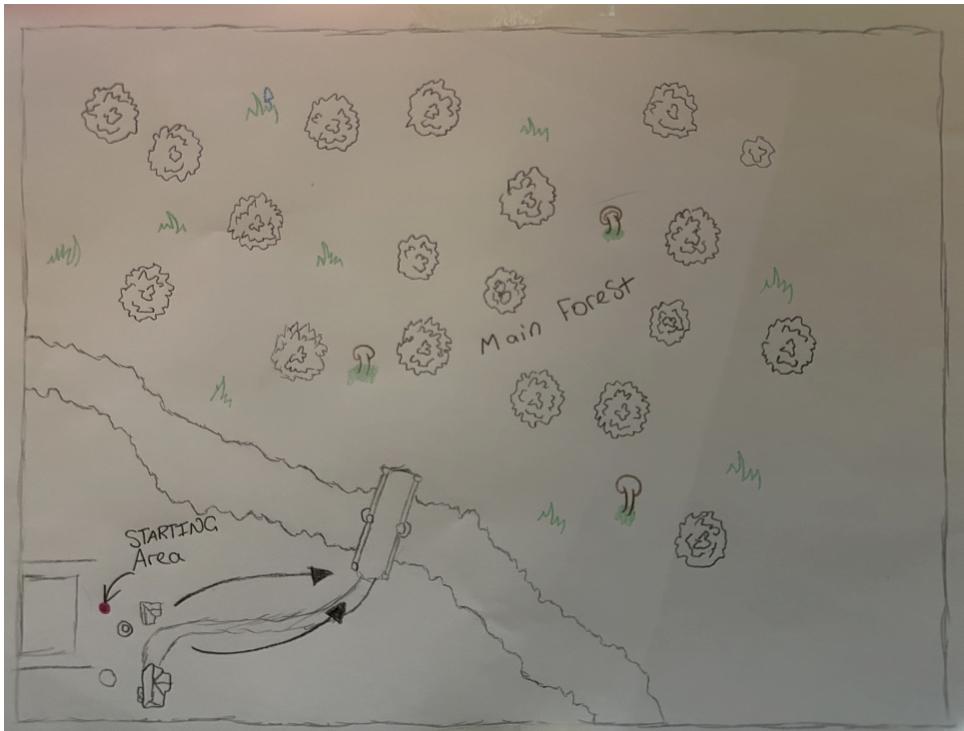
Implementation

Level Design



My initial basic map design was created using a website called inkarnate. This map design allowed me to get a basic understanding of terrain and environment element placement as well as an overall scale for how big I wanted the map to be. Obviously taking inspiration from my moodboards and the games prevalent in them. The basics of the map needed a safe area around one part of the map and a clear path to the open forest area the player can explore. With the safe haven location being easily memorable and not hard to locate.

Game loop and flow



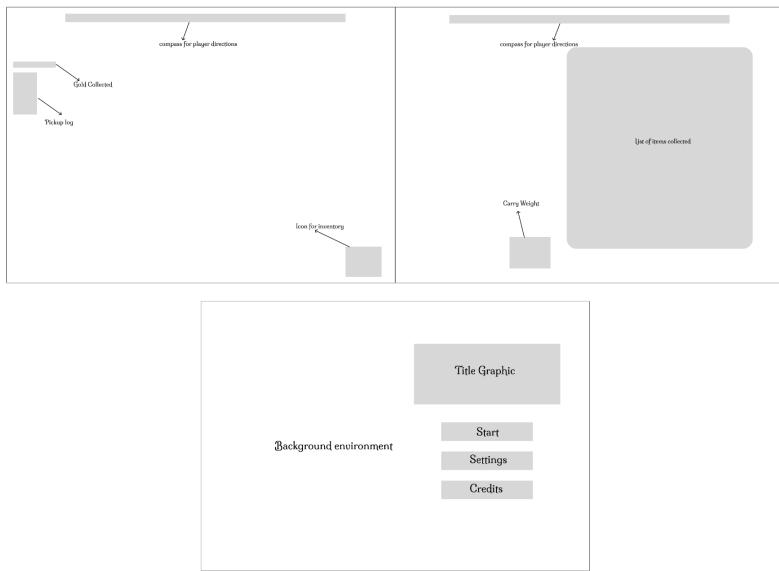
The game play loop of my game is very simple and repeatable, the player starts in the starting house area with their plant fields and some interactables to start with to learn controls, they will then go out over the bridge and explore the forest filled with items they can collect. They will then return to the starting area to plant or display their items and then rinse and repeat. It's a simple gameplay loop and lets the player explore and play at their own pace with no pressures of time and difficulty. It is meant to be a relaxing experience for the player.

Use of AI

For this project I used generative AI in a few areas to help with my project, one way I made use of it was to help with troubleshooting and debugging as it helped to find out when something wasn't working where the error may be and narrow down my search. I also made use of Gen AI when needing to expand upon my existing mechanics ideas to make them work better.

User Interface & HUD

UI Wireframes & Mock Designs



The three UI designs shown above are of my in-game UI(Top Left), Inventory UI(Top Right) and main menu screen(Bottom Middle). When creating these UI screens I focused on making them clean and not overly messy with too many visual elements. Keeping UI screens as minimal as possible while still providing easy to use and understandable UIs.

The Main menu screen will be a basic title card and three button list. With its own separate background level environment to allow for use of wind and other game elements for a dynamic background.

The Inventory UI screen will have a list of each item they have collected, if an item doesn't show it means it hasn't been collected. With this it will show a description of the item and how much the player has collected.

Refinement and Final UI designs



The final UI designs were created for my game going off of the initial wireframes that I created. While creating these UIs I was able to get creative and make my own Titlecard for my game as well as trying out how the live scene background looks for my main menu.

During the creation of my Inventory screen I sourced from google some drawings of the interactable items and took them into photoshop to make them into 2D sprites to use in unity.



If you would like to see some more designs and elements to my project I will link my figma board below

<https://www.figma.com/design/pKn5FGbEym3QMWLsICJg1q/MoodBoardIdeasForUniProjects?node-id=0-1&t=vAbDspeUmjFWahd2-1>

References & Tutorials Used

<https://www.youtube.com/watch?v=WbZpj8WcjN0>

<https://www.youtube.com/watch?v=Aet9fPZSHqc>

<https://www.youtube.com/watch?v=SGz3sbZkfkg>

<https://www.youtube.com/playlist?list=PL-hj540P5Q1hLK7NS5fTSNYoNJpPWSL24>

<https://www.youtube.com/watch?v=W3NNx7polyQ>

<https://assetstore.unity.com/packages/tools/game-toolkits/easystart-third-person-controller-278977?srsltid=AfmBOoppheToEs4inG88XorF-c9jkTnWuH4hIIO95GUDWwdHN40WQD2R>

(The 3rd person movement system I used^)