COMP4902 **Graduation Design Project**	FEYZİYE SCHOOLS FOUNDATION **IŞIK UNIVERSITY**

Project Title
Survival Game Design and Implementation

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REQUIREMENTS ANALYSIS DOCUMENT

1.   Introduction

1.1.   Purpose of the System

This project will be a survival game called 'Big Picture'. In this game, our main character is a man who lost his wife in a chromozombie attack. Chromozombies are an invasive species created by scientists in a laboratory. The main goal is to survive the chromozombies and save the house they built together before the chromozombie attack. The main goal of my game is to make sure players have fun and get lost in an exciting post-apocalyptic world. I want the game to be an enjoyable adventure that lets players escape from their everyday lives and use their imagination. The system's purpose extends to offering a diverse range of gameplay mechanics. Players have the opportunity to explore various aspects, including character navigation, resource collection, combat, and crafting. In summary, the 'Big Picture' survival game system is designed to offer players an enjoyable, emotionally engaging, and ethically responsible gaming adventure. It encourages players to dive into a captivating story and adjust their gameplay tactics as they progress.

1.2.   Scope of the System

This project aims to create an immersive single-player survival game where players will take on the role of the main character. The primary objective is to protect the house constructed by the main character and his wife from the ongoing Chromozombie threat.

Players will be tasked with safeguarding their home by using strategic options, such as deploying fences or confronting Chromozombies. Eliminating Chromozombies yields items and gold, providing essential resources.

Within the game world, players can explore and collect crafting materials and gold. These resources serve as the foundation for crafting and in-game transactions.

Crafting is central to the gameplay, allowing players to create various items that aid in their survival and house defense. Additionally, players can use their collected currency to personalize their surroundings with decorations and other in-game items.

Combat is a crucial aspect of the game, and players can engage in battles with the Chromozombies. They can craft weapons such as spears, guns, and hatchets to use in combat.

There will be a game music and sound effects. Game music will be active in the game scene. Players will be able to manage the volume of that music. Also, there will be sound effects such as walking sound, kill sound, Chromozombie sounds etc.

This game will be available on computers and will be a single-player experience.

The game will be developed using the Unity Engine and integrated with MySQL. Additionally, I will be using the StrageIoC framework for development.

To test the game, I will perform unit tests. I will create a dedicated scene for each feature. Each feature will have its own scene, and testing will be conducted within these scenes. If any of them have bugs, they will not affect the others, making it easy to track and isolate the bugs.

1.3. Objectives and Success Criteria of the Project

- Objective 1: Gameplay Excellence
    - Develop a post-apocalyptic survival game with engaging gameplay mechanics and an emotionally resonant narrative. The game should offer players a compelling and immersive experience.

- Objective 2: Immersive Gaming Environment
    - Create an immersive gaming environment with detailed graphics and audio elements, allowing players to escape into the post-apocalyptic world.

- Objective 3: Core Feature Implementation
    - Integrate key features, including character navigation, crafting, house defense, Chromozombie encounters, and inventory management, to provide a rich and varied gaming experience.

Success Criteria:

- Success Criteria 1: Player Satisfaction
    - Achieve a minimum average user rating of 8/10 in post-release player feedback surveys, indicating high player satisfaction and enjoyment of the game.

- Success Criteria 2: Technical Performance
    - Ensure that the game runs smoothly on computers with a minimum system requirement of an Intel i5 processor, 8GB RAM, and a dedicated graphics card. The game should maintain a consistent frame rate of at least 60 FPS on these configurations.
- Success Criteria 3: Feature Completion
    - Complete all planned features, including character navigation, resource collection, crafting, house defense, Chromozombie encounters, and inventory management, within the project timeline.

Measurement and Evaluation:

- Success Criteria 1: To measure user ratings, post-release surveys will be distributed to a sample of players, and the average rating will be calculated based on their feedback. Player comments and reviews will also be analyzed to identify areas for improvement.
- Success Criteria 2: Technical performance will be evaluated through benchmarking tests on computers meeting the specified system requirements. Frame rate and system resource utilization will be measured and analyzed to ensure optimal performance.
- Success Criteria 3: Feature completion will be tracked using project management tools. Regular reviews and milestone assessments will be conducted to monitor progress and ensure that all planned features are implemented.

1.4.   Definitions, Acronyms, and Abbreviations

- Chromozombie Attack: A term used in the game to describe the initial outbreak of the zombie species created by scientists in a laboratory.
- Navigation Algorithm: The underlying code that allows characters to move seamlessly within the game world. A* algorithm is used to perform that action.
- StrageIoC Framework: The specific framework used for development, providing inversion of control and dependency injection capabilities.
- MSSQL: Stands for "Microsoft SQL." It's the relational database management system used for data storage and retrieval in the game.
- Unit Test: A software testing technique where individual components or units of a program are tested in isolation to ensure their functionality.

1.5.   Overview

This document provides a comprehensive insight into the 'Big Picture' survival game project's requirements and objectives. It serves as a foundational reference for all project stakeholders involved in the analysis, planning, and development of this post-apocalyptic gaming adventure. The document is structured into several key sections, each focusing on specific aspects of the project's requirements.

Visual aids such as diagrams, charts, and UML models are incorporated to enhance clarity and understanding. The primary purpose of this Requirement Analysis Document is to establish a comprehensive understanding of the 'Big Picture' survival game project's requirements and objectives. It serves as an essential resource for project developers, testers, managers, and other stakeholders, ensuring alignment with the project's vision and goals.

2. Current System

'Big Picture' distinguishes itself from other survival games through its multifaceted approach to user immersion. The game offers a unique level of emotional depth by centering its narrative around a protagonist who has tragically lost his wife during a Chromozombie attack. In contrast to many survival games that primarily concentrate on gameplay mechanics, this personal narrative adds a layer of empathy and storytelling not commonly seen in the genre. Furthermore, Chromozombies, unlike typical zombies, are an invasive species created by scientists, providing players with a fresh and unconventional challenge. 'Big Picture' also excels in its meticulous attention to audio elements, which includes in-game music and a diverse array of sound effects, thereby intensifying the immersive experience. This focus on audio sets it apart from competitors who may not prioritize audio to the same extent, ultimately enhancing the player's engagement with the post-apocalyptic setting.

3. Proposed System

3.1. Overview

The goal of the "Big Picture" survival game system is to offer players an immersive post-apocalyptic gaming experience. This section introduces the main players and stakeholders in the system and provides a functional overview.

The 'Big Picture' game is a single-player survival adventure where players take on the role of a protagonist striving to protect the home he built with his wife before a devastating Chromozombie attack. Gathering resources, defending the home, and surviving the Chromozombie menace are the main goals.

- Players: The primary stakeholders are the game players who engage with the system. Their experience and enjoyment are paramount.
- Main Character: The central actor is the game's main character, who represents the player in the post-apocalyptic world.
- Chromozombies: These antagonistic entities are a vital actor in the game, posing a continuous threat.

'Big Picture' is a survival game system designed to provide players with an emotionally charged and captivating gaming experience. To protect their in-game house, players must maneuver through a

variety of gameplay mechanics, including character movement, combat, resource management, and crafting.

3.2. Requirements

3.2.1. Use Cases

- Character Navigation (Priority: High)
  - Actor: Player
  - Description: The player navigates the main character through the game world, exploring, moving towards objectives, and interacting with the environment. This is crucial for moving around the game world, avoiding obstacles, and reaching objectives.

- Crafting (Priority: High)
  - Actor: Player
  - Description: Players collect resources from the game environment and use these resources to craft weapons, tools, and other items for survival and house defense. Crafting contributes significantly to the gameplay mechanics.

- House Defense (Priority: High)
  - Actor: Player
  - Description: Players engage in house defense by setting up fences to protect their home from Chromozombie attacks. This use case is essential for the game's core objective.

- Chromozombie Encounter (Priority: High)
  - Actor: Player
  - Description: Player encounter Chromozombies during gameplay. He/she must engage in combat, using crafted weapons and tactics to defeat these adversaries.

- Inventory Management (Priority: High)
  - Actor: Player
  - Description: Players manage their inventory, organizing and utilizing collected items and resources efficiently. Proper inventory management is crucial for survival and crafting.

- Base Decoration (Priority: Medium)
  - Actor: Player
  - Description: Players have the option to decorate their base by placing decorative items. Base decoration allows players to personalize and customize their gaming environment.

3.2.2. Scenarios

Use Case #1	Character Navigation
Actor	Player
Preconditions	Click to a place in the world
Normal Flow	1. The player initiates navigation by specifying the destination through user input. 2. The game's pathfinding algorithm evaluates the current location, destination, and the game world's terrain. It calculates the most efficient path to reach the destination while avoiding obstacles and accounting for dynamic changes in the environment. 3. Avoid from obstacles. 4. Arrival.
Alternative Flow	1. The player initiates navigation by specifying the destination through user input. 2. The game's pathfinding algorithm evaluates the current location, destination, and the game world's terrain. It calculates the most efficient path to reach the destination while avoiding obstacles and accounting for dynamic changes in the environment. 3. While in transit, a previously unaccounted-for obstacle (e.g., a locked door etc.) blocks the character's path. 4. Recalculate the path and avoid from obstacles. 5. Arrival.

Use Case #2	Crafting
Actor	Player
Preconditions	The game should be active, the player's character must be alive and mobile, and the necessary crafting tools and materials must be available. The player's inventory should have sufficient space, and knowledge of crafting recipes is essential.
Normal Flow	1. The player initiates the crafting process, typically by accessing a crafting book. 2. The player selects the specific item or resource they want to craft from the available options. 3. The game checks if the player possesses the necessary materials and tools for crafting the selected item.

	4. If the player has the required materials and tools, the crafting process begins.
	5. The game consumes the necessary resources, and the crafted item is added to the player's inventory.
	6. The player receives feedback or confirmation of the successful crafting action.
	7. The player can choose to continue crafting additional items or exit the crafting process.
Alternative Flow	1. The player initiates the crafting process, typically by accessing a crafting book.
	2. The player selects the specific item or resource they want to craft from the available options.
	3. The game checks if the player possesses the necessary materials and tools for crafting the selected item.
	4. If the player lacks the required materials or tools:
	• The game provides a notification indicating the missing components.
	• The player is unable to proceed with crafting until the necessary materials or tools are obtained.
	5. The player can choose to continue crafting additional items or exit the crafting process.
Postconditions	The player has successfully crafted the selected item, and it is now available in the player's inventory.

Use Case #3	House Defense
Actor	Player
Preconditions	The player has the option to either purchase fences from the in-game market or has gathered the necessary materials, including a crafted hammer, for fixing existing fences.
Normal Flow	1. The player has the option to either purchase fences from the market or has gathered the necessary materials, including a crafted hammer, for fixing existing fences.
	2. If the player decides to purchase fences:
	− The player enters the market, where they can choose from a selection of pre-made fences for purchase.

	– The player selects the desired type and quantity of fences, which are automatically deducted from their in-game currency.
	3. The game consumes the necessary resources (currency for purchased fences).
	4. The new fences are placed around the house.
Alternative Flow	1. If the player decides to fix existing fences:
	– The game checks if the player has gathered the crafted hammer for repairing the existing fences.
	– If the materials are available, the player proceeds to fix the damaged sections of the fences.
	2. The game consumes the necessary resources (hammer for fixing existing fences).
	3. The repaired sections of the fences are visually restored.
Postconditions	The player has successfully set up house defense structures (purchased or fixed fences) to protect their home from Chromozombie attacks. The selected house defense structures are now in place and contribute to house safety.

Use Case #4	Chromozombie Encounter
Actor	Player
Preconditions	The player has equipped crafted weapons or tools for combat.
Normal Flow	1. While exploring the game world, the player's character encounters a group of Chromozombies. The player must engage in combat to defeat them.
	2. The player equips a crafted weapon or tool, such as a wooden spear, a hatchet or a gun, to prepare for combat.
	3. The player approaches the Chromozombies, and the game checks for their proximity and triggers the combat encounter.
	4. The game tracks the health and progress of the player character and the Chromozombies during combat.

	5. If the player successfully defeats all the Chromozombies, they receive rewards, and collected items from the defeated adversaries.
	6. The player can choose to continue exploring the game world, gathering resources, and encountering more challenges.
Alternative Flow	1. While exploring the game world, the player's character encounters a group of Chromozombies. The player must engage in combat to defeat them.
	2. The player equips a crafted weapon or tool, such as a wooden spear, a hatchet or a gun, to prepare for combat.
	3. The player approaches the Chromozombies, and the game checks for their proximity and triggers the combat encounter.
	4. The game tracks the health and progress of the player character and the Chromozombies during combat.
	5. During combat, if the player's character's health reaches zero, the character dies, and the player loses all materials in their inventory.
	6. The game displays a notification indicating the player character's death.
	7. Player character doesn't lose the base, but apart from that, they lose all the inventory.
Postconditions	The player has successfully engaged in combat with and defeated the Chromozombies, gaining experience points and rewards. The player character's health and inventory may be affected by the encounter. In the alternative flow, the player character has died during combat and has lost all materials in their inventory.

Use Case #5	Inventory Management
Actor	Player
Preconditions	The player's character has an inventory to store these items
Normal Flow	1. The player opens the inventory menu, typically by pressing the backpack button.
	2. The game displays the player's inventory, showing a grid or list of collected items.
	3. The player can select an item in the inventory to view its details, such as name, quantity, and description.

	4. The player has the option to organize items within the inventory, including sorting, stacking, or moving items between slots.
	5. The player can equip or use items directly from the inventory, depending on the item type.
	6. The player can drop or discard items they no longer need, freeing up space in the inventory.
Alternative Flow	Inventory Full: • If the player's inventory becomes full, the game provides a notification and restricts the player from picking up new items until space is freed up.
Postconditions	The player has effectively managed their inventory, organized items, and potentially freed up space if the inventory was full.

Use Case #7	Base Decoration
Actor	Player
Preconditions	The game is active, and the player's character has an outdoor base or area to decorate. The player has in-game currency to purchase decoration items from the market.
Normal Flow	1. The player opens the market, which offers a variety of outdoor decoration items, such as fences, garden ornaments, or outdoor furniture.
	2. The player browses the available decoration items in the market and selects items they wish to purchase.
	3. The player can view item details, including the item's appearance, cost, and any special features.
	4. The player character can then place the selected decoration item at a desired location within the outdoor base area.
	5. Once the item is positioned as desired, the player clicks the left mouse button to purchase it.
	6. The cost of the decoration item is deducted from the player's in-game currency.
Alternative Flow	Replacing or Removing Items: If the player wishes to replace or remove a previously placed decoration item, they can click on the item and sell it or directly remove it.

Postconditions	The player has successfully decorated their outdoor base by placing outdoor decoration items and making a purchase by clicking the left mouse button, personalizing their outdoor gaming environment.

3.3.   Nonfunctional Requirements

- Usability:
  - The game should have an intuitive user interface that allows players to easily navigate and interact with the in-game environment. The controls should be user-friendly, and on-screen instructions should provide guidance when needed.

- Reliability:
  - The game should be designed to minimize crashes or technical glitches. It should have error-handling mechanisms in place to gracefully handle unexpected issues. Save and checkpoint features should ensure that player progress is not lost in the event of an unexpected interruption.

- Performance:
  - The game should run smoothly on a range of computer specifications to ensure a broad audience can enjoy it. Load times should be optimized, and in-game animations should be fluid. Additionally, the game should maintain a consistent frame rate to avoid disruptions in gameplay.

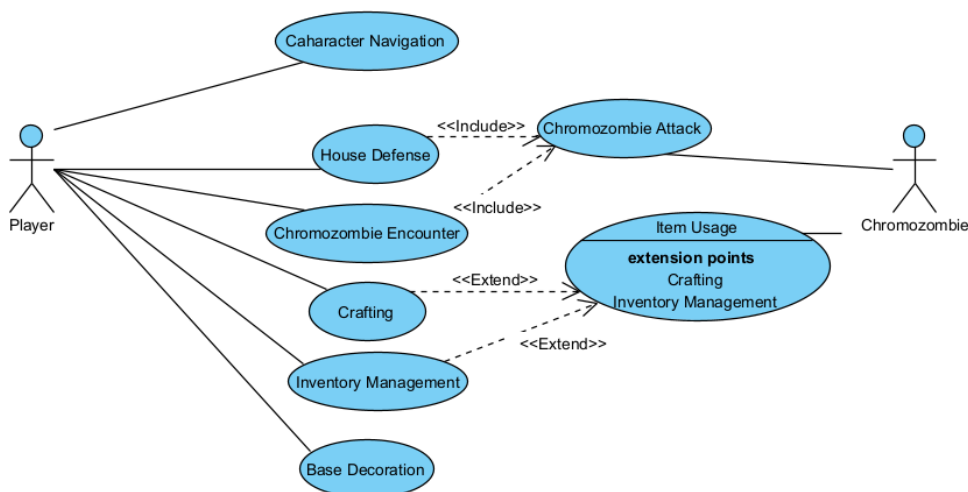## 3.4.   System Models

3.4.1.   Use Case Model

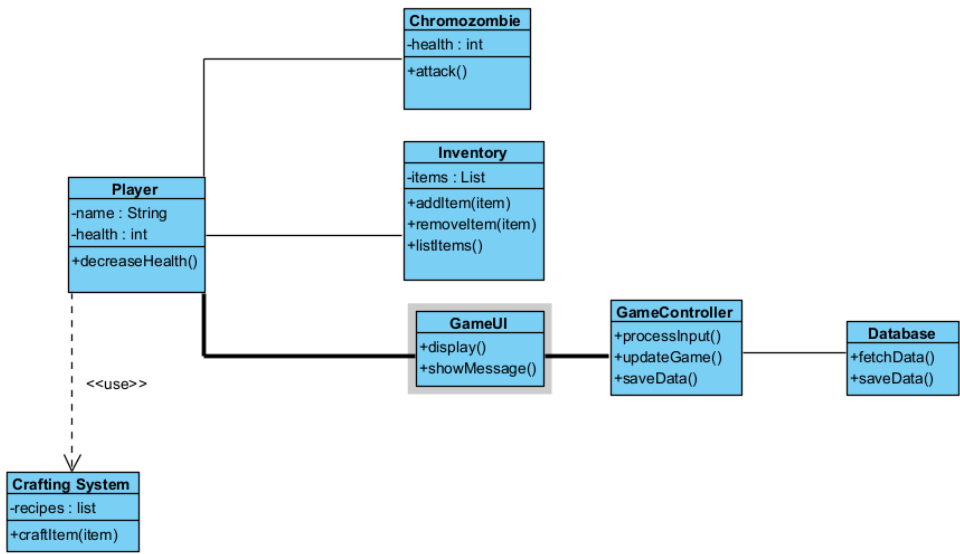Figure 3.4.1.1 Use Case Diagram

3.4.2. Object Model

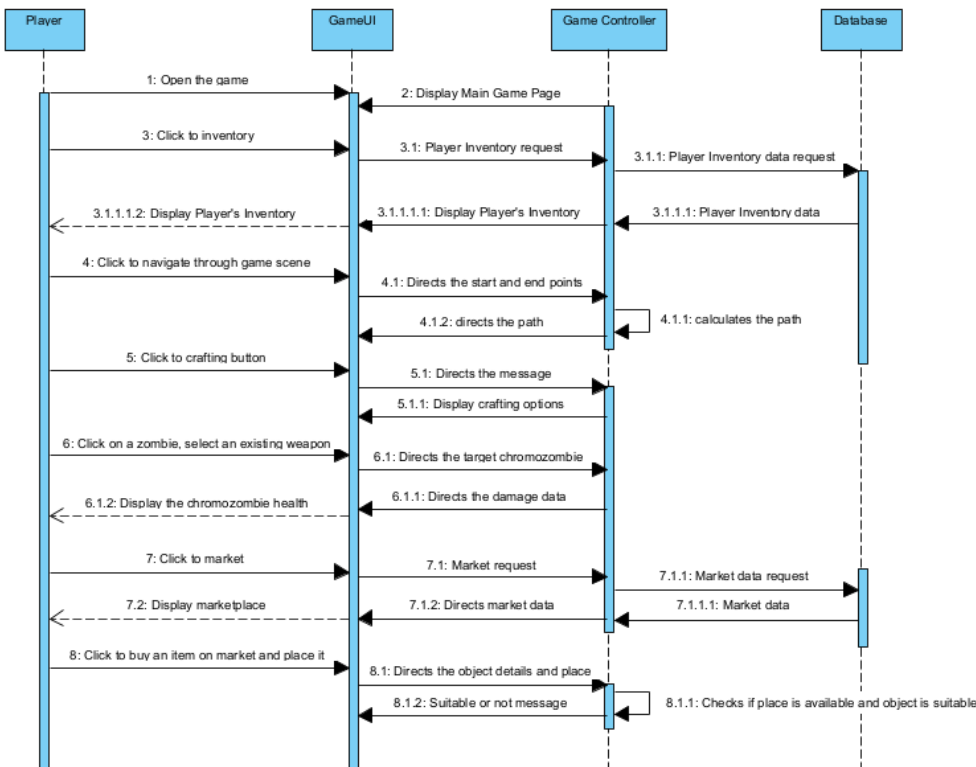Figure 3.4.1 Object Model

3.4.3. Dynamic Model
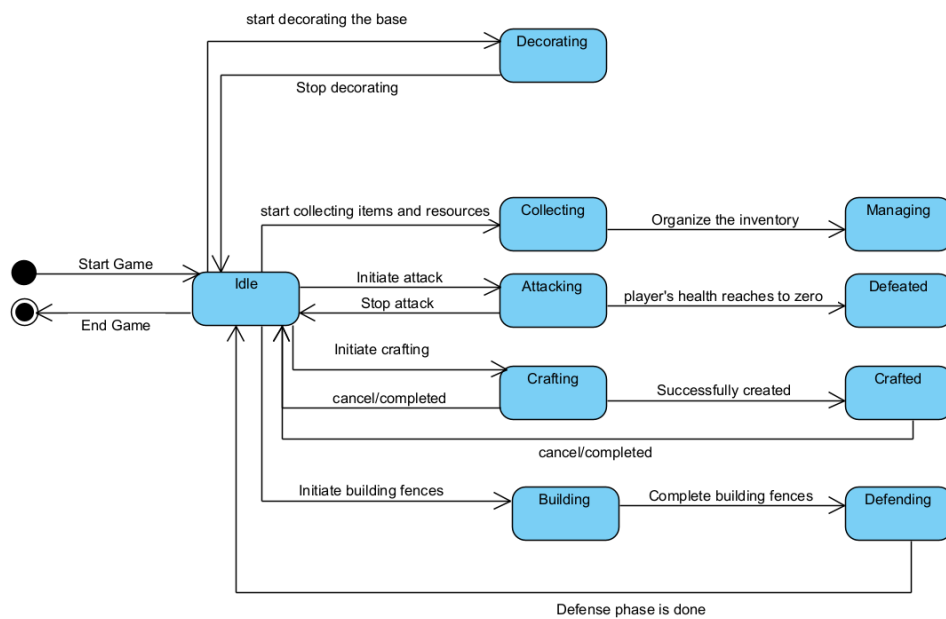

Figure 3.4.2: Sequence Diagram

Figure 3.4.3: State Machine Diagram

3.4.4. User Interface—Navigational Paths and Screen Mock-ups

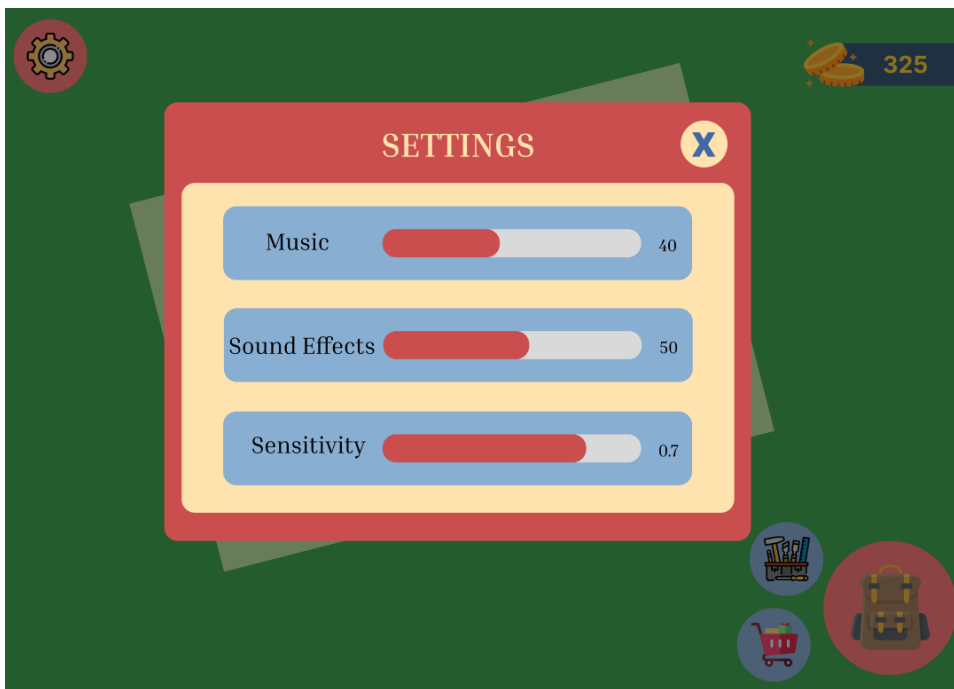
Figure 4.1

Figure 4.2

Figure 4.3

Figure 4.4

Figure 4.5

Navigation: In Figure 4.1, there are several buttons, such as inventory, settings, crafting, and market buttons. When we click on the inventory button, it will direct us to Figure 4.5. We can simply close that page by pressing the close button. When we close it, we will return to Figure 4.1. When we press the market button, the game will direct us to Figure 4.2. Similarly, the craft button will direct us to Figure 4.3, and the settings button will direct us to Figure 4.4.

4. Other Analysis Elements

4.1. Risks and Alternatives

Table 1. Risks

Risk	Likelihood	Effect on the project	B Plan Summary
Technical Issues	High	Delayed development, system instability	Regular code reviews, robust testing
Insufficient testing procedures	High	Critical delays in product release and quality issues.	Implement a thorough testing schedule with specific milestones and contingency plans for identified issues during testing.
Player Feedback	Medium	Potential dissatisfaction, gameplay adjustments	Agile development, responsive updates
Resource constraints due to budget cuts	Medium	Slower development pace and potential feature cutbacks	Regular budget reviews and efficient resource allocation strategies. Identify and prioritize critical features to safeguard against cuts.
Technical dependencies on third-party software,	Medium	Delays and project disruptions if third-party software encounters issues	Identify and secure alternative software solutions or implement in-house development as a backup plan.

4.2. Project Plan

Table 2. List of work packages

WP#	Work package title	Members involved
WP1	Grid System	Yaren Çay
WP2	Path Finding Algorithm	Yaren Çay
WP3	Inventory System	Yaren Çay
WP4	Object Placing	Yaren Çay
WP5	Craft System	Yaren Çay
WP6	Nav Mesh	Yaren Çay
WP7	Testing	Yaren Çay
WP8	Documentation	Yaren Çay

Table 3.1 Work Package 1

WP 1: Grid System Implementation			
Start date: 27.10.2023 End date: 29.10.2023			
Leader:	Yaren Çay	**Members involved:**	-

Objectives: The primary objective of this work package is to implement the grid system for the 'Big Picture' survival game. The grid system is essential for character navigation, positioning game assets, and ensuring a seamless player experience. By the end of this work package, I aim to have a fully functional grid system integrated into the game's architecture.

Tasks:
Task 1.1: Grid System Design
The purpose of this task is to create a detailed design for the grid system. It will include defining the grid's dimensions, cell properties, and interactions with game elements.
Task 1.2: Grid Implementation
This task involves coding and integrating the grid system into the game engine. It aims to ensure that the grid accurately reflects the design specifications and functions seamlessly within the game.

Deliverables
D1.1: Implemented Grid System
The implemented grid system will be a deliverable representing the functional integration of the grid into the game engine. This will include all necessary code and assets for the grid's operation.

Table 4.2 Work Package 2

WP 2: Path Finding Algorithm			
Start date: 30.10.2023 End date: 05.11.2023			
Leader:	Yaren Çay	**Members involved:**	-

Objectives: The main objective of this work package is to implement the A* pathfinding algorithm into the 'Big Picture' survival game. The A* algorithm is essential for enabling character navigation and efficient pathfinding throughout the game world. By the end of this work package, I aim to have a fully functional A* pathfinding system integrated into the game's architecture.

Tasks:
Task 2.1: A* Pathfinding Algorithm Integration
The purpose of this task is to integrate the A* pathfinding algorithm into the game engine. This includes coding the algorithm and ensuring it functions correctly within the game's grid system.

Deliverables
D2.1: Integrated A Pathfinding Algorithm* This deliverable represents the successful integration of the A* pathfinding algorithm into the game engine. It will include all the code and assets necessary for pathfinding.

Table 5.3 Work Package 3

WP 3: Inventory System			
Start date: 06.11.2023 End date: 12.11.2023			
Leader:	Yaren Çay	**Members involved:**	-
Objectives: The primary objective of this work package is to develop and implement the Inventory System for the 'Big Picture' survival game. The Inventory System is critical for resource collection, crafting, and effective inventory management throughout the game. By the end of this work package, I aim to have a fully functional Inventory System integrated into the game's architecture.			
Tasks: Task 3.1: Inventory System Design The purpose of this task is to create a detailed design for the Inventory System, outlining its structure, item management, and user interface components. Task 3.2: Inventory System Implementation This task involves coding and integrating the Inventory System into the game engine. It aims to ensure that the system accurately reflects the design specifications and functions seamlessly within the game. Task 3.3: Inventory System Testing This task focuses on thoroughly testing the implemented Inventory System to ensure that it manages items, crafting materials, and resources effectively. Testing will cover various scenarios to validate its reliability.			
Deliverables D3.1: Inventory System Design Document This document will outline the design specifications of the Inventory System, including user interface mockups. D3.2: Integrated Inventory System This deliverable represents the successful integration of the Inventory System into the game engine. It includes all the code and assets necessary for item management and user interaction.			

Table 6.4 Work Package 4

WP 4: Object Placing
Start date: 13.11.2023   End date: 21.11.2023

Leader:	Yaren Çay	**Members involved:**	-

Objectives: The primary objective of this work package is to implement the Object Placing feature for the 'Big Picture' survival game. Object Placing allows players to decorate and personalize their bases with various in-game objects and items. By the end of this work package, I aim to have a fully functional Object Placing system integrated into the game's architecture.

Tasks:
Task 4.1: Object Placing System Design
The purpose of this task is to create a detailed design for the Object Placing system, outlining how players can select, position, and interact with in-game objects.
Task 4.2: Object Placing System Implementation
This task involves coding and integrating the Object Placing system into the game engine. It aims to ensure that players can accurately place and interact with objects within the game environment.
Task 4.3: Object Placing System Testing
This task focuses on thoroughly testing the implemented Object Placing system to ensure that it allows players to place and manipulate objects effectively. Testing will cover various scenarios to validate its reliability.

Deliverables
D4.1: Integrated Object Placing System
This deliverable represents the successful integration of the Object Placing system into the game engine. It includes all the code and assets necessary for object placement and interaction.

Table 7.5 Work Package 5

WP 5: Craft System

Start date: 21.11.2023   End date: 27.11.2023

Leader:	Yaren Çay	**Members involved:**	-

Objectives: The primary objective of this work package is to develop and implement the Craft System for the 'Big Picture' survival game. The Craft System allows players to craft various items, including weapons and tools for survival and house defense. By the end of this work package, I aim to have a fully functional Craft System integrated into the game's architecture.

Tasks:
Task 5.1: Craft System Design
The purpose of this task is to create a detailed design for the Craft System, outlining the types of items that players can craft, the resources required, and the crafting process.
Task 5.2: Craft System Implementation
This task involves coding and integrating the Craft System into the game engine. It aims to ensure that players can accurately gather resources and craft items for survival and house defense.
Task 5.3: Craft System Testing
This task focuses on thoroughly testing the implemented Craft System to ensure that it allows players to collect resources and craft items effectively. Testing will cover various scenarios to validate its reliability.

Deliverables
D5.1: Craft System Design Document
This document will outline the design specifications of the Craft System, including mockups.
D5.2: Integrated Craft System
This deliverable represents the successful integration of the Craft System into the game engine. It includes all the code and assets necessary for resource collection and crafting.

Table 8.6 Work Package 6

WP 6: Nav Mesh			
Start date: 28.11.2023 End date: 30.11.2023			
Leader:	Yaren Çay	**Members involved:**	-

Objectives: The primary objective of this work package is to implement the Nav Mesh system for the Chromozombies in the 'Big Picture' survival game. The Chromozombie Nav Mesh system is crucial for enemy navigation, enabling Chromozombies to move through the game world, engage with players, and pursue them efficiently. By the end of this work package, I aim to have a fully functional Chromozombie Nav Mesh system integrated into the game's architecture.

Tasks:
Task 6.1: Chromozombie Nav Mesh System Design
The purpose of this task is to create a detailed design for the Chromozombie Nav Mesh system, outlining the areas of the game world where Chromozombie navigation is allowed and how the system handles pathfinding.
Task 6.2: Chromozombie Nav Mesh System Implementation
This task involves coding and integrating the Chromozombie Nav Mesh system into the game engine. It aims to ensure that Chromozombie navigation within the game world is smooth, obstacle-free, and that they can effectively engage with players.
Task 6.3: Chromozombie Nav Mesh System Testing
This task focuses on thoroughly testing the implemented Chromozombie Nav Mesh system to ensure that enemy navigation is efficient, and the system accurately handles pathfinding for Chromozombies. Testing will cover various scenarios to validate its reliability.

Deliverables
D6.2: Integrated Chromozombie Nav Mesh System
This deliverable represents the successful integration of the Chromozombie Nav Mesh system into the game engine. It includes all the code and assets necessary for Chromozombie navigation and pathfinding.

Table 9.7 Work Package 7

WP 7: Testing			
Start date: 01.12.2023 End date: 08.12.2023			
Leader:	Yaren Çay	**Members involved:**	-

Objectives: The primary objective of this work package is to thoroughly test the 'Big Picture' survival game to ensure it meets quality and performance standards, is free of critical defects, and offers an immersive player experience. By the end of this work package, the game should be ready for a successful release.

Tasks:
Task 7.1: Test Planning
Develop comprehensive test plans covering various aspects of the game, including gameplay, user interface, performance, and security.
Task 7.2: Test Case Preparation
Create a set of detailed test cases that encompass different in-game scenarios, boundary conditions, and usability tests.
Task 7.3: Testing Execution
Execute the prepared test cases on different platforms and configurations to ensure cross-compatibility.
Task 7.4: Defect Identification and Reporting
Identify and document defects and issues, prioritizing them based on severity.
Task 7.5: Regression Testing
Conduct regression testing after defects are resolved to ensure that new fixes haven't introduced new problems.
Task 7.6: Performance Testing
Perform performance testing to ensure the game runs smoothly on recommended hardware configurations.
Task 7.7: Security Testing
Validate the security measures to safeguard player data and protect against cheating.
Task 7.8: User Acceptance Testing
Execute user acceptance tests to ensure the game meets players' expectations.

Deliverables
D7.1: Test plans for each testing category.
D7.2: Test cases with detailed instructions.
D7.3: Test reports including defect logs and resolution status.
D7.4: User acceptance reports summarizing player feedback.
D7.5: Performance testing results.

Table 10.8 Work Package 8

WP 8: Documentation			
Start date: 12.10.2023 End date: 19.10.2023			
Leader:	Yaren Çay	**Members involved:**	-

Objectives: The primary objective of this work package is to thoroughly test the 'Big Picture' survival game to ensure it meets quality and performance standards, is free of critical defects, and offers an immersive player experience. By the end of this work package, the game should be ready for a successful release.

Tasks:
Task 8.1: Requirements Analysis Documentation
Document the results of requirements analysis, specifying what the game must do and what its limitations are.
Task 8.2: Licensing and Legal Documents
Prepare the necessary legal documents, including licensing agreements and copyright notices.
Task 8.3: Review and Editing

Review and edit all documentation to ensure clarity, accuracy, and consistency.

Deliverables
D8.1: Licensing and legal documents to protect intellectual property.
D8.2: Requirements analysis documentation.

5. Glossary

- Chromozombies: In the context of the game, Chromozombies refer to an invasive species created by scientists in a laboratory. They serve as the primary antagonists in the game, and players must engage in combat to survive encounters with them.

- Inventory: The player's inventory is a collection of items and resources that they gather and use throughout the game. It includes crafted tools, collected materials, and other in-game assets.

- Crafting: Crafting involves the process of creating tools, weapons, and other items from collected resources and materials found in the game environment. Players can combine these resources to craft new items.

- Decoration Items: Decoration items are objects that players can purchase and place in their outdoor base area to personalize and customize their gaming environment. These items are used for outdoor base decoration.

- Base: The player's base serves as a personal living space within the game. It includes both indoor and outdoor areas that players can customize and defend from Chromozombie attacks.

- Market: The in-game market is a virtual marketplace where players can select and purchase various items, including decoration items and resources.

6. References

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