GAZI UNIVERSITY FACULTY OF ENGINEERING
COMPUTER ENGINEERING

CENG447 GAME DEVELOPMENT
GAME DESIGN DOCUMENT
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1. Introduction

This document details the design, mechanics, and development process of the game **Alpuna**. The game revolves around a character who has lost their identity and embarks on a mystical journey in a dark world to reclaim their name and restore spiritual balance.

Players will uncover their supernatural abilities, battle enemies, and solve puzzles throughout this journey. The core aim of this project is to create a game that integrates storytelling with engaging gameplay mechanics, providing players with a unique experience of identity discovery and struggle.

2. Problem

2.1 Objectives

The objectives of this project are as follows:

- To deliver a meaningful story that evokes a sense of exploration and struggle for the players.
- To create gameplay mechanics that are simple to grasp yet offer strategic depth.
- To provide players with a short yet fulfilling journey of identity discovery.

2.2 Play Values

The game is designed around the following values:

- **Exploration:** Players will navigate and uncover the mysterious depths of a dark forest.
- **Discovering Power:** Players will use their supernatural abilities to defeat enemies.
- **Courage and Strategy:** Players will need to employ intelligence and quick reflexes to overcome challenges.

3. Analysis

3.1 Resources

The player has access to the following abilities and encounters the following enemies:

Abilities:

Blue Attack Ability (Key 1): Emits an energy wave that damages nearby enemies, consuming 20% energy.

Red Attack Ability (Key 2): Emits a stronger energy wave, consuming 50% energy.

Enemies:

Dark Spirits: Standard enemies scattered across various regions of the forest.

Tepegöz: The game's final boss and guardian of the valley.

3.2 Boundaries

- The player has an energy limit and must manage energy consumption wisely.
- Access to the Tepegöz's lair is restricted until all Dark Spirits are cleared.

3.3 Interaction Patterns

The player interacts with the game world in the following ways:

NPC Conversations: The player gathers information and receives tasks from Muhtar, Ata Tree, and Kurt.

Shortcuts: The player can pause, resume, or access the menu using the ESC key.

Ability Usage: The player can attack using keys 1 and 2.

4. Design

4.1 Initial Design Idea

The game was conceptualized as a story-driven action-adventure. Tasks and mechanics were designed to support the character's search for identity while creating an atmospheric experience. Simple yet meaningful gameplay mechanics form the foundation of the game.

4.2 Final Design Idea

Game Dynamics:

- Players progress through the story as they complete tasks.
- Strategic use of abilities is critical for defeating enemies.

Game Mechanics:

Blue Attack Ability (Key 1): Consumes 20% energy and damages nearby enemies.

Red Attack Ability (Key 2): A more powerful attack that consumes 50% energy.

Game Rules:

- The player cannot access the boss area without clearing all Dark Spirits.
- Energy depletion restricts the use of abilities.

5. Implementation

5.1 Main Menu

The main menu includes the following options:

Start New Game: Begins the first level of the game.

Exit Game: Closes the application.

5.2 NPCs and Dialogues

- **Muhtar:** Directs the player to the Ata Tree.
- **Ata Tree:** Teaches the player how to use their abilities and assigns tasks.
- **Kurt:** Guides the player to the lair and instructs them to confront Tepegöz.

6. Evaluation

6.1 Feedback and Testing

6.1.1 General Impressions
The game's atmosphere and the mystical tone of its opening scenes were praised by players.

A focus group of five individuals aged 20-25 played the game and shared their experiences and evaluations. While most participants found the gameplay mechanics engaging, they highlighted that the game's short duration limited their overall experience. The group suggested adding more tasks and exploration elements to enhance the gaming experience.

6.1.2 Issues and Improvements

- **Character Movement:** Participants reported instances of a "flying bug" where the character could unintentionally float. This issue was reproduced during testing and subsequently resolved.
- **Sound Effects:** Footstep sounds were described as unnatural, and the lack of sound effects during boss battles was noted. Improvements were made to enhance the auditory experience.
- **Mana System:** Players identified a bug that allowed attacks even when mana was depleted. This issue was fixed during testing.
- **Map and Navigation:** The minimap was deemed insufficiently guiding, leading to player confusion. The map was redesigned to provide clearer guidance and prevent players from accessing the final boss prematurely.
- **Visual Issues:** Participants noted color issues with distant bushes and the density of fog, which impeded exploration. These issues were corrected, and visual elements were optimized.

6.1.3 Summary and Evaluation

Based on feedback from the test group, the following adjustments were made:

- Visual glitches with bushes were resolved.
- The mana system was balanced, and related bugs were fixed.
- Sound effects were improved, particularly in boss battles.
- The map design was adjusted to ensure a linear progression.

Future Suggestions:

The focus group proposed the following improvements:

1. Increasing the variety of tasks.
2. Giving Kurt a more active guiding role.
3. Adding new mechanics to enhance the sense of exploration.

7. Recommendations & Conclusions

7.1 Recommendations

- **Visual Enhancements:** Improving the clarity and appeal of ability animations.
- **Enemy Diversity:** Introducing new enemy types with varied attack patterns.

7.2 Conclusions

- **Successes:** Gameplay mechanics and atmospheric elements were well-received.
- **Areas for Improvement:** Better explanations of the difficulty curve and task progression are needed.

8. References

- Unity Documentation: Unity Docs
- Game Narrative Design: Building Stories for Games, J. Smith
- CENG447 Game Development Course Documents, Assoc. Prof. Dr. Murat Yılmaz