

Technical Design Document

CHRONICLES OF ARBORELIA

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Introduction

"Chronicles of Arborelia" is a captivating single-player RPG game set in the rich and diverse world of Arborelia Prime. Players assume the role of Iris Tekara, a courageous female cyborg hero, as they explore the planet, engage in combat with various enemies, and complete quests to uncover the secrets of this mysterious world. The game combines immersive storytelling, strategic combat, and an intricate quest system to create an engaging gaming experience.

Rationale

The game's development aims to provide a unique and enjoyable experience for players who enjoy story-driven RPG games with a focus on exploration, character progression, and tactical combat. By creating a rich game world with compelling characters and storylines, we aim to captivate players and encourage them to invest time in exploring and mastering the game's mechanics.

Background

"Chronicles of Arborelia" is set on the recently discovered planet of Arborelia Prime, a world abundant with diverse ecosystems and hidden ancient technology. As players explore its lush landscapes and enigmatic ruins, they'll uncover the remnants of a highly advanced civilization that thrived centuries ago. The game's narrative invites players to unravel Arborelia's mysteries and help determine its future.

Terminology

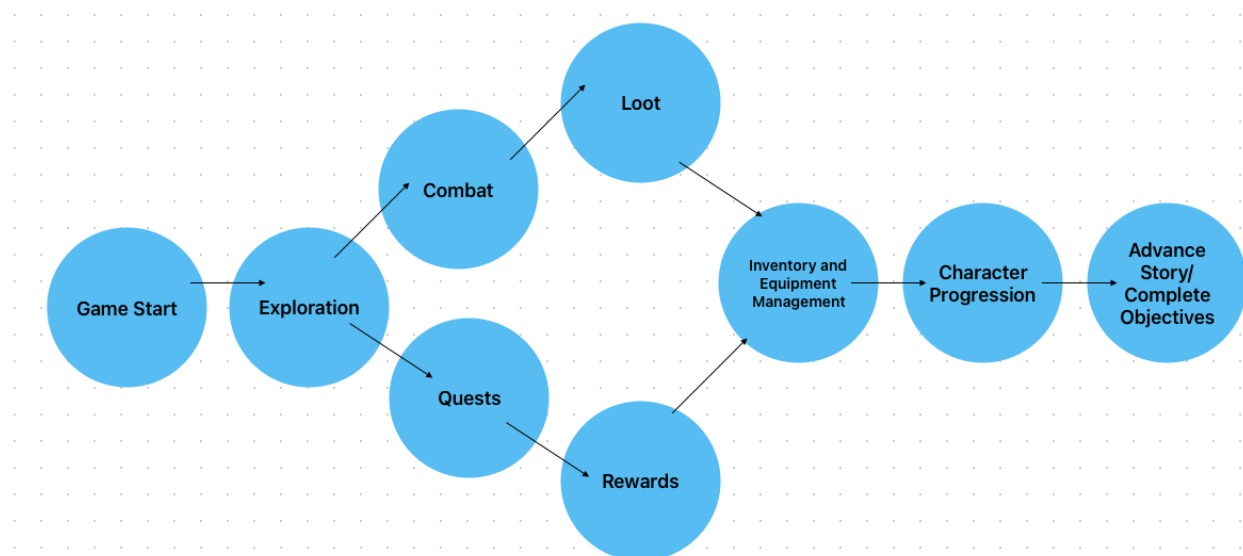
- Protagonist: The main character controlled by the player (Iris Tekara)

- NPC: Non-player character, computer-controlled characters that provide information, quests, or services to the player
- Quest: A series of tasks or objectives that the player must complete to advance the story or unlock rewards
- Equipment: Items that can be equipped by the player to improve character stats and abilities
- Inventory: A collection of items, weapons, and equipment that the player has acquired throughout the game

Non-Goals

- Multiplayer gameplay
- Mobile platform support
- Virtual reality or augmented reality integration

High-level Diagram



Proposed Design

“Chronicles of Arborelia” will be developed using the Unity game engine (version 2022.2.17) and will feature a 3D game world with high-quality graphics, character models, and animations. The game’s mechanics will include real-time combat, an

inventory and equipment system, a quest system, and character progression through skill and attribute upgrades.

System Architecture

- Unity game engine as the core framework for game development
- Modular architecture for easy expansion and maintenance of game mechanics
- Client-side game logic and rendering with platform-specific builds for Windows and Mac

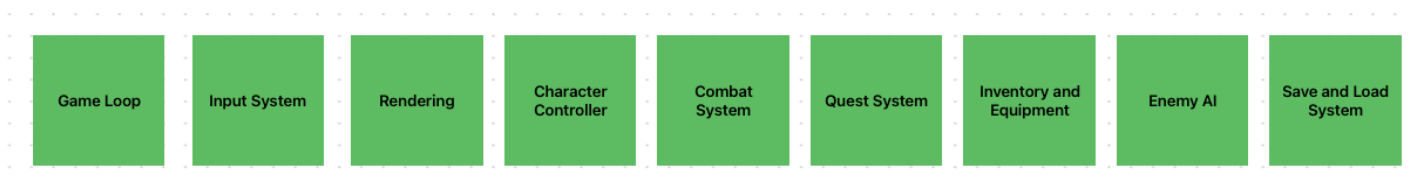
Data Model

- Game data stored in serialized format (JSON) for easy editing and manipulation
- Character data (attributes, skills, equipment, inventory) saved in a local save file

System Design

- Event-driven game loop with a fixed timestep for physics and rendering
- Component-based entity system for managing game objects and their behaviors
- AI systems for enemy behavior, pathfinding, and combat logic
- Collision detection and response for character movement and interactions

System Design Graph



Interface/API Definitions

- Unity APIs for rendering, input handling, physics, and animation
- Custom APIs for inventory management, quest tracking, and character progression

Migration Strategy

Not applicable, as Chronicles of Arborelia is a new game project.

Delivery Platform

The game will be available as a downloadable game for PC and Mac platforms, with the option for players to purchase and download the game from a digital storefront such as Steam or Apple Store.

Hardware and Software Requirements

- Windows: Windows 7/8/10 (64-bit), DirectX 11 compatible GPU, 4 GB RAM, 10 GB free disk space
- Mac: macOS 10.12 Sierra or later, Metal compatible GPU, 4 GB RAM, 10 GB free disk space