# Node-Based Visual Novel System for Resurrection: Melodie

Project Documentation Submitted

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# Project Description:

The *Node-Based Visual Novel System* developed for *Holy Grape Productions* provides an intuitive framework for building interactive narratives in Unity by utilizing XNode as a plugin that allows us to easily make graphs and nodes. As this plugin gives us a highly customizable skeleton for nodes in Unity. The system that the team is making would empower the developers to quickly prototype, test, and iterate on story elements without extensive reprogramming. Thus, significantly improving the workflow efficiency and would allow a more streamlined approach to both narrative development and quality assurance.

## **Thesis Statement**

## This project, “Resurrection: Melodie” is being developed for Holy Grape Productions, a game development studio that was founded recently by Hundotte, a music composer, and game developer. The client previously worked on several projects under Rayark, a video game company that made the hit Rhythm games Deemo and Cytus. The studio has a vision of becoming a leader in narrative-driven games, with a long-term goal of expanding its portfolio to appeal to a global audience while exploring different themes, such as music, artistic expression, humanity, and imagination.

## The client’s task includes the development of an internal node-based story. This system will be central to the game’s visual novel (VN) component, enabling dynamic narrative progression. It must be capable of:

## Triggering prefabs to generate camera effects, sounds, or control the game’s changing displays before the dialogue begins.

## Facilitating the VN display itself, with the added functionality of being able to load from any scene or specific dialogue node for testing, saving time during iterative testing phases.

## **Objectives**

The objective of this project is to create a Visual Novel System, as stated by our client to the team, that does the following:

* Develop a node-based visual novel system that can trigger camera effects, sounds, or display changes before and after dialogue events.
* Implement a testing feature in the system that allows developers to load from any scene or specific dialogue node, reducing testing time by a significant amount.

## **Significance of the Project**

The internal node-based visual novel system will streamline the development process for the game, “Resurrection: Melodie”. Allowing for better storytelling and a more efficient way for quality assurance testers to test out the game build for each iteration. With this system, it will allow the client to save time and resources by having the team create the system for them.

## **Theoretical Framework**

1. **Emotional Engagement through Music**The game leverages music theory and its emotional impact in the making of its character, story, and gameplay. The game uses music to enhance emotional empathy from its players, with each character (Performer) tied to a musical piece.
2. **Game Engagement Theory**Resurrection: Melodie also draws on the Game Engagement Theory of which the players would be able to play more of the game with more challenges given to them that grants them immediate rewards. In the game’s case it is through the rewarding of in-game currency that allows them to not only strengthen their characters, but also get more characters to use in fights.
3. **Node-based Visual Novel System**The game itself will use a node-based visual novel system that will allow the client to design interactive narratives using a graphical interface, where the different elements of the story are represented as interconnected nodes.

## **Scope and Limitations**

**Scope:**

* The project will focus on integrating a node-based visual novel system, ensuring seamless narrative transitions and the ability to trigger prefabs for effects and sounds.
* The system will also prioritize the ability to load from any specific scene or dialogue node, facilitating faster testing during development.

**Limitations:**

* Limited development time will restrict the number of functionalities that the team may be able to add to the system.
* The game’s performance on lower-end devices might be limited due to its high reliance on Unity’s graphical and audio features, potentially reducing the visual and sound quality on older platforms.

## **Review of Related Works**

The game itself is inspired by many different works made by many different companies, examples of these are Takt Op. Symphony, Reverse 1999, and Fate Grand Order. These games, each with their unique strengths, have influenced the game’s design in various ways. Takt Op. Symphony, with its focus on music and its compelling narrative, inspired the game’s core concept of using music as a driving force. Reverse 1999, known for its innovative turn-based card battle system and elegant art style, influenced the game’s combat mechanics and the look and feel for the game. Finally, Fate Grand Order, with its rich world-building, unique characters, and character designs, inspired the game’s narrative structure and character development. By drawing inspiration from these sources, the game aims to create a unique and engaging experience for players. The system where the team is tasked with meanwhile would be based on Xnode, a general-purpose node editor in unity that lets developers design their own node-based system.

**Takt Op. Symphony**

The game the client is planning to make is mainly inspired by the mobile game “Takt Op. Symphony”. The game itself stands out in the competitive market with its exceptional musical compositions and character designs, along with it being a sequel to the anime released back on the 5th of October 2021. Takt Op. Symphony has garnered a lot of attention for its dedication to classical music and high-quality artwork, with the game featuring compositions from renowned pieces by Tchaikovsky, Mozart, Beethoven, and many more. These musical pieces are integrated into characters known as Musicarts. These Musicarts are characters players use in battle to fight enemies [1].

**Reverse 1999**

The game “Reverse 1999” showcases a unique blend of vintage art style and engaging visual presentation that gives it a dark and elegant feel to it. With the core gameplay mechanics using simple card-based combat, with no speed-related mechanics or deck-building elements, which resulted in lackluster engagement and satisfaction typically derived from well-designed combat mechanics. Additionally, the grindy nature of the character progression and inefficient energy system further hinder hindering player engagement [2]. These issues spotted by the author of the article “Gakstr福” is what the game aims to improve upon, as the client found that despite it being heavily flawed, it was still a fun game to play due to its simplicity.

**Fate/Grand Order**

The article by The Danime Times contains most of his thoughts as someone who played the game for half a year. The author noted that the game captivates the players with its intricate visual novel narrative, with each chapter unfolding a compelling story and featuring a diverse cast of heroic spirits drawn from various mythologies and historical periods [3]. In a much more recent article by Josh Torres focuses more on a much more recent chapter in the game, which is the Avalon le Fae. Which focuses more on Fate/Grand Order’s unique take of a story blended with the Arthurian Legend. With Altria Caster, the protagonist, embarking on a reluctant journey to overthrow Morgan le Fay. The chapter’s success lies in its complex narratives and character arcs [4].

**Nodes**

What are nodes? Nodes are in general a basic part of scripts in visual scripting in Unity. A node can listen for events, get a value of a variable, modify a component of a GameObject, spawn GameObjects, delete them, and many more. These nodes appear as blocks in a Graph Editor and can be arranged and connected to other nodes by the developers [5].

**Xnode**

Xnode is a free node-based plugin in Unity that is user friendly, intuitive and allows developers to create their own custom nodes based on their needs [6]. Due to its flexibi

# Game Design Document:

## **Game Overview**

The year is 22XX. Humanity has been wiped out by a god from another dimension, The Gatekeeper. The Church that worshipped her opened a gate to her realm, allowing the Evils of Imagination to destroy the entire planet, aiming to prevent humanity from ever creating music ever again. In response to the collapse of the arts and imagination in the human consciousness, music itself has chosen Performers: beings who embody specific pieces of music through their lives and person, as conduits for Inspiration, the same potent magic used to destroy everything. Morgan, a Conductor frozen from before the apocalypse, gathers together a small band of survivors to take down the massive forces of the Church that controls what remains of the world. Together, their small group of Performers aims to take back the world and restore music back to humanity.

## **Features**

* Deep strategic gameplay
* Unique and varied art styles
* Excellently written story and characters
* Great music that is both original and pays homage to classical pieces
* Attractive and deeply complex characters and character designs

## **Player Objectives** In Resurrection: Melodie, players would embark on a journey to free the world from the oppressive rule of the Church of Evils. The primary objectives are designed to guide them through both the narrative and strategic elements of the game:

1. Progress Through the Story
2. Collect and Upgrade their Performers
3. Engage in Strategic Turn-Based Combat
4. Build Character Relationships
5. Restore Music and Artistic Inspiration to the World

## **Genre**

Gacha, Turn-based strategy, JRPG, Visual Novel

**Target Market**The target market of the game are young adult visual novel fans, gacha fans, as well as classical music enthusiasts.

**Unique Selling Points**

* Uses music as the main focal point for the story.

## **Core Mechanics**

## **Progression:**

## Story Progression:

## Between battles, the game switches to a visual novel mode, where the player experiences dialogue, narrative events, and story choices.

## The story sections feature character portraits, dialogue boxes, and backgrounds to show different environments. These sequences advance the plot, develop character relationships, provide context for the battles, and allow the player to get to know the cast better as well.

## Character Development and Bonds:

## As the story progresses, players can build up relationships towards their characters through choices in the visual novel section of the game.

## Building stronger bonds also unlocks specific character episodes that build up the character’s story even more and allows the player to get to know them better.

## **Battle Mechanics:**

## Turn Based System:

## Each turn, players can perform up to 3 moves. These can be either normal attacks or skills, but skills have a special requirement which would be explained below.

## Moves:

## Normal Attacks: basic attacks are split up into 3 types of Cadenza stacks, red, green, and blue.

## Skills: Each performer is given 3 skills that may either buff the player’s characters, debuff the enemy, damage the enemy, or heal the allied characters. These skills require you to have a certain amount of cadenza stacks for them. When you use these skills, you use up cadenza stacks.

## Cadenza: Are special skills that every performer/character has. This is the strongest skill each performer has in their kit and has a heavy requirement for their usage.

## Cadenza Stacks:

## After using a normal attack, the player gains a cadenza stack of the color they used.

## Each succeeding attack in a turn allows the player to gain the cadenza stack from the previous attacks as well.

## Example: Player uses red, green, and blue in that order. The player gains 3 reds, 2 greens, and 1 blue by the end of the turn.

## Cadenza stacks are required to use your Skills and Cadenza.

## Example: A skill may require you to have 3 Red Cadenza stacks to activate or a Cadenza might require you to have 2 Red, 3 Blue, and 1 Green Cadenza stacks.

## Using Skills and Cadenza:

## To use a skill or Cadenza, the character must have accumulated enough Cadenza stacks required to use them.

## Once a skill or Cadenza is used, the required number of stacks is consumed.

## **Gacha System:**

## **Character Acquisition:**

## Players obtain through a gacha system, where they spend in–game currency to summon characters.

## Characters vary in rarity, which would affect their status, abilities, and potential synergies in battle.

## Players can do a single pull or a 10 pull.

## **Character Roles and Specialties:**

## Each character obtained from the gacha pool has a unique role in battle, but they are not limited to that role. These unique roles that they could fill in are:

## Damage Dealers: Characters who focus on delivering high damage output.

## Tanks: Characters that absorb damage to protect their allies.

## Supports: Characters that provide healing, buffs, or debuffs during battle.

## **User Interface**

A screenshot of a drawing

Description automatically generated

## A screenshot of a video game Description automatically generated

## **Design Goals**

To create a visually appealing, narratively immersive, strategic, and engaging game that appeals to its player base, and to make a game that people who enjoy the music, JRPG, and Visual Novel genres.

## **Setting**

## The game is set in a post-apocalyptic world where everything is under the control of the Church of Evils where music and any artistical inspiration is banned by the Church itself. Morgan/Player, along with his Performers, will be tasked to restore music and artistic inspiration in the world and stop the Church from strengthening their “Gods”, which will lead to the end of the world.

**Characters**

|  |  |
| --- | --- |
| **Name** | **Description** |
| Morgan | A Conductor from 20XX who was frozen as part of an initiative to preserve musical knowledge for the future generation while music was facing its decline. Now, faced with the Church’s corruption of the ideals they believed in, Morgan seeks to restore music to humanity and destroy those who use their beliefs for evil. A fearless and headstrong leader, their obsession and perfectionism makes them a world-class Conductor and musician, with a deep understanding and appreciation for all eras of music. Their mission, in their words, is to “bring the love and knowledge of music to a future generation who is able to appreciate it”. |
| Lili | The first survivor rescued by the Conductor. A girl who grew up abandoned and struggled like an animal to survive in a cruel world. After being rescued by the Conductor, she values her miserable life lowly and wants to be self-sacrificial to protect those she cares about. After her sacrifice, her resurrection helped her see new meaning in her life: she finds solace in uplifting others, bringing a small light to the dim cave of trauma that is her life. |
| Joy | Born deaf, she hears sounds through vibrations in the air and the ground. A bolt of lightning strikes her when she activates her Score transformation. She often suffers from depression and reclusivity due to her inability to socialize with others, but her Cadenza sends her into a triumphant state of mania for a short while. Deep down she is a sensitive and emotional individual who simply desires to be loved and to give love to others. She and *[Gesang]* understand each other and get along well. |
| Archie | A famous music theorist, Dr. Balo, is intent on tearing down the stigma that surrounds tuning systems and obsesses over attaining perfect mathematical harmony. In reality he's an unconfident wreck despite holding the answers to the universe at his fingertips. He enjoys his personal work but loves sharing his sharing his discoveries with others. Like Morgan, he seeks to reverse the wrongs of the church, particularly by recovering the music recordings they hold on to for cruel experimentation on Performers. |
| Gaya | Formerly a member of a community of engineers and scientists, Gayatri never felt that she truly understood human emotion the way others did. She categorized her emotions, learning to present the right one based on the situation. But her curiosity got the better of her, and even though music was outlawed in her settlement, which was under the protection and worship of [], she found herself creating a little instrument out of the nuts and bolts she was fond of. She was exiled when she awoke her score, and wandered the wastelands in misery, hoping to be accepted back to her people and scrubbed of this curse of power she had received. She and Archie get along exceptionally well, even though she enjoys bullying him a lot. |
| Nicole | A complete psychopath with severe bipolar disorder. Often extremely chirpy and cheerful, but snaps into a murderous mood at the smallest, most unpredictable trigger. Sadistic and cruel, yet playful with her comrades. |
| Penny | A capable young woman and quick learner who desperately tries to be optimistic, but an event in her past keeps her bracing for the worst at all times. she is clumsy, horribly anxious, and EXTRAORDINARILY hard on herself, but is genuinely kind and uplifting and just wants the best for her new team. has definitely bitten someone in self-defense at her absolute worst. age 23  Penny suffers from a form of traumatic attachment and survivor's guilt from extensive abuse under Nicole. Whenever she screwed up by accident (frequently), she'd have to watch Nicole nonchalantly kill one of her fellow employees right in front of her. Her Cadenza reflects an endless cycle of guilt, trauma and learned dependence, and she's constantly haunted by images of her former abuser in her final moments before she ended her life. |
| Gesang | *Gesang* suffered from aphasia as a child, although he could understand language perfectly. He found solace in prayer, the one place where he felt understood. He is afraid of interacting with people but is strong-willed when he is alone. After an experience where he was about to be killed but held faithful in his religion, he fused with the score and became a Performer. He now attempts to communicate with jumbled phonemes of words he wants to use. He is happy to be able to communicate well with Leticia and has a complicated but amicable relationship with the other religious Performers. |
| Apple | A brainwashed agent of the church, who is torn inside from years of torture and abuse. Outwardly she presents herself as an emotionless robot of duty, but her internal self-pokes through sometimes in moments of extreme emotion. |
| Fehlt | Their loved one was taken from them right in front of their eyes by an Evil of Imagination. And at that very moment, they lost the ability to touch anything. They sat there, unable to give their love a proper burial, nor able to end their own suffering with a knife through their chest. To this day, they avoid forming attachments with anyone, pursuing their personal vendetta against the church for their systematic genocide. But deep down, they want to make sure to never let anyone perish under their watch again. |
| Cindy | A maid who worked under Lady Lubov's cruel rule. Despite her ill treatment, Eleanore had accepted her circumstances and did her job to her utmost best. When the task of caring for one of the young heirs of the family fell to her, she did her utmost best, with genuine love for her ward. Unfortunately, Lubov was a bitter and jealous woman, and secretly ordered for the child to be executed, being jealous of the nurturing love that Eleanore offered her. In a desperate bid to save the child, Eleanore sacrificed herself, and became attuned to the score, gaining incomprehensible amounts of power as a result. They ran as far as they could from the castle, but despite all her power, the journey was cruel, and her beloved ward succumbed to illness eventually. Wandering the world aimlessly, Eleanore continues to seek out a new master to redeem herself, swearing that she would never fail anyone the same way ever again. |

# Technical Design Document:

## **Hardware**

* **Development Platforms**: Mid-to-high spec PCs to handle Unity 2D, necessary for smooth gameplay development and asset handling.
* **Target Platforms**: Windows, Mac, Android.
* **Testing Requirements**: Devices with minimum specifications to test game performance across different hardware capabilities, including lower-end devices.

## **Software**

## **Unity**: Primary development engine, selected for its versatile 2D capabilities and its robust support for narrative-driven and visual novel game mechanics.

## **Milanote**: Used for collaborative work on the game's visual and artistic design, supporting the unified vision for characters, environments, and other graphical assets.

## **GitHub/Git**: Version control to manage project updates, facilitate team collaboration, and track development progress.

## **Visual Studio Code**: Development environment for scripting, debugging, and optimizing game code.

## **Project Milestones Checkpoints**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 |
| Project Document |  |  |  |  |  |
| GDD |  |  |  |  |  |
| Technical Design Document |  |  |  |  |  |
| Diagrams |  |  |  |  |  |
| Dialogue System |  |  |  |  |  |
| Save and Load System |  |  |  |  |  |

## **Manpower Allocation**

|  |  |
| --- | --- |
| Task | Member |
| GDD | John Bernard Durano |
| Technical Design Document | John Bernard Durano |
| Deployment Diagram | David Aldwin Deguzman |
| ERD | Gian Marlo Sobrevinas and John Bernard Durano |
| Data Dictionary | Gian Marlo Sobrevinas and John Bernard Durano |
| Use Case | David Aldwin Deguzman, Gian Marlo Sobrevinas |
| Fully Dressed Use Case | David Aldwin Deguzman, Gian Marlo Sobrevinas, and John Bernard Durano |
| Node System | John Bernard Durano |
| Save and Load System | John Bernard Durano |
| PowerPoint Presentation | John Bernard Durano and David Aldwin Deguzman |

# The Team:

## Project Team

|  |  |
| --- | --- |
| John Bernard Durano | Programmer and Project Manager |
| David Aldwin Deguzman | Team Member |
| Gian Marlo Sobrevinas | Team Member |

# Art Bible:

[Resurrection: Melodie - Milanote](https://app.milanote.com/1S3pEf1djjBA6E/resurrection-melodie?p=BSwenL0Ap5b)

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