University of Nevada, Reno
CS425 Capstone Project

Team 18

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Abstract

This project is focused on creating an interactive computer-based roleplaying game (RPG). The goal of this project is to create a piece of software that can provide the user with hours of entertainment through a digital, interactive medium. The game will provide the user with an engaging and immersive fictitious world. It's focus is to help relieve stress through storytelling and challenges that offer worthwhile rewards that can be used within the game. As the player progresses through the game, they will become more powerful and able to take on increasingly difficult challenges presented by the game. The game will feature an intuitive user interface and controls. The difficulty will be challenging but fair, so that the player may experience the game without undue frustration.

Project Description

The goal of this project is to create an interactive roleplaying game that can provide its players with a satisfying way to relieve stress, work towards a goal, or simply spend their time. Many people have stressful lives, and video games are a common method of relieving stress and providing a creative outlet for their free time. This project is aimed towards users with an affinity towards roleplaying and creative storytelling.

The game will feature a single player that must navigate an overworld, accomplishing various quests given to them by NPCs (non-player characters) in a fashion similar to traditional Japanese RPGs, such as *Pokémon* and early *Final Fantasy* games. As the player explores the wilderness of the world, they will encounter enemies and monsters that must be battled using a turn-based combat system. The player will discover lore about the world throughout their journey and participate in quests and adventures given to them by the game's NPCs, which may be completed at the player's leisure.

This project will affect the team's professional growth because it gives them an opportunity to develop and refine a complex application. The Computer Science curriculum at UNR spends a lot of its time teaching theories about computing and doing small, individual projects to teach a specific concept. By working in a team on an RPG, the team members will gain insights to how professional teams develop and review their software consumer to create an enjoyable product that meets someone else's needs.

This project has a lot of potential for future enhancements and products. If any bugs or glitches are found in the game after completion, they can be fixed, and an update can be released. New levels, characters, quests, and items can be created and added to the game as updates or as extra downloadable content. Sequels and spin-offs can also be created to add to the story, or to use the same characters and world to tell a new story, or create a different kind of game. The game could also be remade in the future using better assets, better technology, and more people in order to have an improved design.

The team may run into several potential problems while developing this project. One problem is that two of the team members are completely new to creating video games, and to Unity, the platform on which the game is being developed. This may lead to inefficiencies in creating the game, as they may struggle to figure out the best way to create or code some aspects of the game. There also could be difficulties in achieving market acceptance for the game. Role-playing games are popular, so there is a lot of competition, from established titles from large, famous companies to indie games from smaller companies, teams or even individuals.This game will be developed using Unity, written in C# with additional resources found from the Unity Asset Store. It will be released on a standalone executable for Windows devices.

The team consists of four people: Jonathan, Sean, Christine, and Ryan. They will be advised by Dr. Eelkee Folmer who teaches CS 328: Fundamentals of Game Design, which makes him a good advisor for our team.

Jonathan has experience developing games with Unity for classes and personal projects. He is very familiar with Unity's scripting and C#, and will be primarily responsible for implementing the player controls and combat systems in the game.

Sean has experimented with various video game projects developed using Unity and using a custom game engine for Graphics (CS 480) and Game Engine Architecture (CS 381). He will be involved with creating 2D Pixel Art and general programming.

Christine is new to Unity and creating video games, but has a strong interest in video game design. She has experience programming in C++ for previous classes, which is similar to C#. She will work on level design and the programming needed to procedurally generate those levels.

Ryan has limited experience in Unity and creating video games. He has experience programming in C++, and limited experience coding in C#. He will be involved in creating a project timeline and will be helping the other members when needed.

Market potential or Open Source Significance

The game that demonstrates the market potential in fantasy role playing games is Octopath Traveler. In September 2017, Square Enix released a beta demo of this game, which allowed players to complete the prologue chapters for the characters Primrose and Olberic. Upon completing the demo, players would be asked to fill out a survey to express what they enjoyed and what they did not enjoy about the game. Four months later, the Octopath Traveler demo received over a million downloads and more than 45,000 survey responses were completed. In addition, the game launched on July 13th and received one million sales within its first month.

Games developed by independent studios (indie games) have also seen financial success for creating unique RPGs. One case study is Golf Story which was developed by a two-person team and released on the Nintendo Switch last year. According to eShop downloads charts, the game was one of the most frequently downloaded titles in the weeks after it launched.

Pokemon is most similar to the RPG that Team 18 is creating. In Pokemon, a ten-year-old kid sets out on a journey to discover the world and find various types of Pokemon. Similarly, in the game being created by the team, the player will travel throughout a world to solve different puzzles and record their findings along the journey. Indirect competition will come from other games made by independent studios. Direct competition will come from games that are specifically tailored for an RPG experience.

The novelty of Team 18's solution comes from being a unique RPG experience that would be accessible for gamers who are unfamiliar with the genre. Some RPGs require the player to gain an arbitrary amount of experience before being able to progress through the story. The game being designed by Team 18 will feature difficulty scaling and the story will not be locked behind arbitrary experience requirements, so it could be better enjoyed by people who want a faster-paced game.

https://www.gameinformer.com/b/news/archive/2018/01/30/project-octopath-traveler-demo-downloaded-a-million-times-shares-updates.aspx

https://www.ign.com/articles/2018/08/03/octopath-traveler-hits-1-million-copies-in-sales-and-shipments

https://www.dualshockers.com/golf-story-successful-launch-according-nintendo-switch-eshop-charts/

Time Worked on Project Concept

Jonathan worked for approximately a total of two hours setting up the initial document, writing the cover page, abstract, and main project goals over the course of the week prior to the original posted due date.

Sean worked for an hour writing the Market Potential section for the proposal and an additional hour planning what he would like to see in the game during Individual Assignment 1.

Christine worked for about an hour writing part of the Project Description and making various edits.

Ryan worked for about half an hour writing in the Project Description and editing.

On October 9th, the team met for an additional two hours to discuss additional gameplay mechanics and story elements that they would like to implement in the game. In total, our team spent five-and-a-half hours conceptualizing our game.