OBJECT ORIENTED PROGRAMMING PROPOSAL

Group Name: PONYJAYA

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1.0 Introduction

Pony Attack is a fast-paced, single-player shooter that pits players against relentless waves of hostile ponies in a unique and humorous twist on the swarm-based genre. Inspired by *My Little Pony*, a popular children's animation known for its colorful and whimsical characters, this game reimagines these typically gentle creatures as formidable enemies and a determination to overrun the player. As the lone defender, players must survive increasingly difficult waves of these aggressive ponies, collecting points and power-ups along the way.

Featuring a variety of powerful pony enemies, each with unique abilities and appearances, **Pony Attack** delivers a fresh and engaging experience. The game balances simplicity with challenge, offering intuitive controls and progressively harder waves to keep players on their toes. Combining humor with intense gameplay, **Pony Attack** offers an exciting twist on the classic swarm shooter genre, appealing to players looking for both fun and a challenge, all while drawing playful inspiration from the beloved world of *My Little Pony*.

2.0 Project Description

Pony Attack seeks to develop a fast-paced swarm-based shooter game where players confront waves of attacking ponies. As the sole shooter, the player's objective is to eliminate as many ponies as possible to earn points, while the game's difficulty progressively increases with each wave. The game will emphasise quick reflexes, precision, and strategic thinking to navigate through the intensifying challenges.

Pony Attack will involve the design, development, and testing phases, ensuring smooth mechanics, intuitive controls, and engaging gameplay. The game will cater to a wide audience of casual and competitive gamers, with a focus on simple yet challenging entertainment.

2.1 Background of Study

Swarm-based games are a popular genre within the gaming industry, often focused on survival and point accumulation as players face large hordes of enemies. Games such as *Call of Duty Zombies Mode*, *Left 4 Dead*, and *Vampire Survivors* have demonstrated the appeal of overwhelming numbers as a key mechanic for tension and excitement.

The Pony Attack project aims to build on this established genre by adding a unique theme, contrasting the stereotypically gentle image of ponies with a fast-paced, action-packed survival challenge. This juxtaposition of style and mechanics is designed to offer players both a humorous and exhilarating gaming experience.

2.2 Problem Statement

Despite the popularity of swarm games, many follow similar themes (zombies, aliens, etc.), leading to saturation within the genre. There is a lack of novel or unexpected themes that could add fresh appeal and differentiation from competitors. Additionally, many existing swarm games focus heavily on multiplayer, limiting engagement for players seeking a strong single-player experience.

The Pony Attack project aims to address these gaps by introducing an innovative theme and providing a single-player-focused game that blends humour with intense action. By doing so, we seek to capture a segment of the gaming market that craves both originality and fast-paced gameplay.

2.3 Objectives

1. To develop an engaging and visually appealing swarm-based shooter game with a unique pony theme.
2. To provide players with a challenging, single-player experience that emphasizes reflexes, precision, and strategy.
3. To ensure the game offers scalable difficulty to maintain long-term player engagement and satisfaction.
4. To implement smooth and intuitive controls for seamless gameplay.
5. To launch the game on multiple platforms, ensuring accessibility to a broader audience.

3.0 Project Details:

Pony Attack will offer an engaging gaming experience through its unique combination of fast-paced gameplay and unexpected thematic elements. The game will be developed with the following key features and characteristics:

1. App choice:
   • Unity: cross-platform game engine developed by Unity Technologies
   • Visual Studio: an integrated development environment developed by Microsoft
2. Core Gameplay Mechanics:
   • Single-Player Mode: Players control a lone shooter tasked with eliminating waves of ponies. The goal is to survive for as long as possible while accumulating points.
   • Swarm Dynamics: Ponies will appear in increasingly larger numbers, moving at faster speeds and with varying attack patterns. Players must employ strategy and quick reflexes to manage the growing threat.
   • Progressive Difficulty: The game will feature a progressive difficulty system where the pace and toughness of the pony hordes increase as the player survives longer, ensuring continuous challenge.
2. Power-Ups and Upgrades:
   • In-Game Power-Ups: Players can collect power-ups that temporarily enhance their shooting abilities, increase speed, or provide defensive shields, offering brief advantages during intense waves.
   • Upgrade System: Points earned from defeating ponies can be used to unlock or upgrade weapons, improve player stats, or acquire new abilities to help fend off the relentless pony swarms.
3. Diverse Pony Types:
   • Basic Ponies: Standard enemies that appear in large groups and follow straightforward attack patterns.
   • Fast Ponies: Smaller, quicker ponies that are harder to hit but easier to kill.
   • Laser Ponies: Futuristic enemies equipped with high-tech laser weapons. They have advanced targeting systems and can fire beams of energy at the player.
   • Boss Ponies: Special enemies that appear at set intervals, requiring advanced tactics to defeat and offering significant point bonuses.
4. Scoring and Leaderboards:
   • Point-Based System: Players earn points for each pony defeated, with higher points awarded for more challenging enemies like lasered ponies or boss ponies.

4.0 Conclusion

The Pony Attack project aims to break new ground in the swarm game genre by combining unique and light-hearted thematic elements with intense and rewarding gameplay. By addressing the oversaturation of typical swarm themes and delivering a high-quality single-player experience, Pony Attack is poised to attract a wide variety of gamers looking for both humor and challenge in their games. This project will serve as a testament to creative game design while ensuring an engaging and memorable experience for players.