



UNIVERSITI
TEKNOLOGI
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The Momoks

HauntU: A Swarm Attack Survival Game

Project Proposal

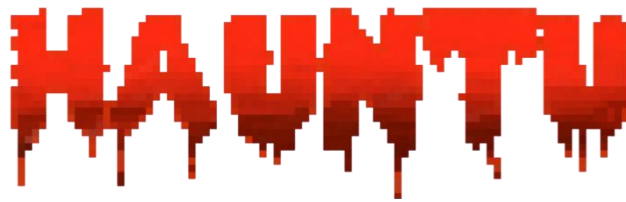
TEB1043: Object Oriented Programming

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1.0 Introduction



HauntU is a 2D survival game where players confront waves of ghostly enemies in a dynamic and challenging environment. Utilizing Unity as the development tool, the game incorporates elements from successful games such as *20 Minutes Till Dawn*, *Left 4 Dead*, *Plants vs. Zombies*, *Papers, Please*, and *Stardew Valley*. This proposal outlines the game's design, features, and development strategy, leveraging these influences to create an engaging and innovative experience.

2.0 Game Overview

HauntU is designed to test players' survival skills against relentless waves of ghost enemies, each with unique abilities and attack patterns. Players will utilize traditional weapons, mystical defenses, and strategic placement of barriers to fend off these supernatural threats.

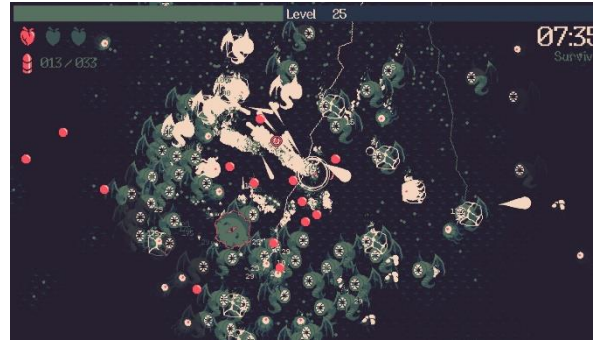
2.1 Game Objective

- **Primary Objective:** Survive increasingly difficult waves of ghost attacks.
- **Secondary Objectives:** Collect artifacts to enhance abilities and upgrade weapons to adapt to escalating challenges.

3.0 Research and References

3.1 "20 Minutes Till Dawn"

- **Wave-Based Survival:** Similar to *20 Minutes Till Dawn*, *HauntU* will feature progressively difficult waves of ghost enemies. Players will need to survive each wave while dealing with increasingly complex challenges.
- **Continuous Upgrades:** Inspired by the game's upgrade system, *HauntU* will allow players to collect power-ups and artifacts to dynamically enhance their weapons and abilities during gameplay.
- **Dynamic Combat:** The game will incorporate fast-paced combat scenarios with varied enemy behaviors to keep players engaged.



3.2 "Left 4 Dead"

- **Swarm Mechanics:** Drawing from *Left 4 Dead*, *HauntU* will implement large groups of enemies with diverse behaviors. For example, the Pontianak will stun players, while the Langsuir will teleport to create unpredictable challenges.
- **AI Director:** Consideration will be given to implementing a dynamic system that adjusts the intensity of enemy waves based on player performance, ensuring a balanced and engaging experience.
- **Enemy Variety:** The game will feature a range of ghost types, each with unique abilities, to keep the gameplay fresh and challenging.



3.3 "Plants vs. Zombies"

- **Wave Mechanics:** Like *Plants vs. Zombies*, *HauntU* will include waves of enemies that grow stronger over time. Players will need to strategize to manage increasingly tough waves.
- **Resource Management:** Players will manage resources such as health and mystical items, paralleling the management of plants and sunlight in *Plants vs. Zombies*.
- **Strategic Setup:** The game will allow players to place and upgrade defensive barriers, similar to how players deploy plants to defend against zombies.



3.4 "Papers, Please"

- **Time Management:** Inspired by *Papers, Please*, *HauntU* will incorporate time-sensitive mechanics to heighten gameplay intensity. Players will need to make quick decisions and manage resources effectively.
- **Complex Systems:** The game will feature interconnected systems, such as weapon upgrades and defensive setups, that players must navigate and manage.



3.5 "Stardew Valley"

- **Resource Management:** The game will include mechanics for managing health, items, and upgrades, drawing from *Stardew Valley*'s resource management and crafting systems.
- **Customization:** Players will have the opportunity to upgrade and customize their weapons and defenses, inspired by the crafting and customization elements in *Stardew Valley*.



4.0 Game Features

4.1 Gameplay Mechanics

- **Ghost Characters (Enemies):**

- **Pontianak:** Moves quickly, attacks with sharp claws, and can stun players with its scream.
- **Langsuir:** Flies and teleports, making it difficult to hit.
- **Toyol:** Small and fast, steals resources or health.
- **Hantu Pocong:** Slow but tough, absorbs damage, and can summon more pocongs.
- **Hantu Penanggal:** A floating head that passes through walls, increasing difficulty.



- **Player Abilities:**

- **Traditional Weapons:** Utilize keris, bamboo spears, and salt bombs.
- **Mystical Defenses:** Activate protective chants and holy water.
- **Defensive Barriers:** Set up charmed gates and candles to ward off spirits.

4.2 Game Modes

- **Survival Mode:** Players must endure endless waves of enemies.
- **Arcade Mode:** Features a more casual experience with customizable difficulty.

4.3 Upgrades and Artifacts

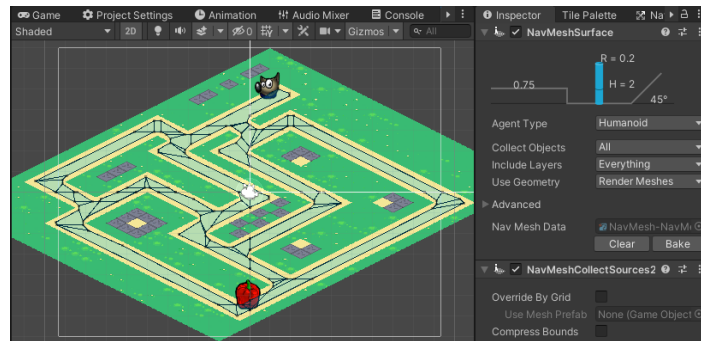
- **Weapon Upgrades:** Collect floating power-ups to enhance weapons during gameplay.
- **Artifacts:** Gather items like batu delima (ruby stone) to boost abilities and improve survivability.

5.0 Development Plan

5.1 Timeline

- **Week 1-2:** Concept development, initial design, and setting up the Unity project.
- **Week 3-5:** Development of core gameplay mechanics, enemy behaviors, and wave systems.
- **Week 6-7:** Integration of upgrade systems, defensive mechanics, and player abilities.
- **Week 8:** Playtesting, balancing, and bug fixing.
- **Week 9:** Final adjustments, polishing, and preparation for release.

5.2 Tools and Techniques



- **Unity Development:** Utilize Unity's **NavMesh**, **Object Pooling**, **ScriptableObjects**, and **Particle Systems** to build dynamic and engaging gameplay.
- **AI and Pathfinding:** Implement intelligent enemy movement and behavior using **NavMesh** or *A Pathfinding Project**.
- **Resource and Upgrade Management:** Develop systems using **ScriptableObjects** and **UI Toolkit** for managing upgrades and player resources.

6.0 Conclusion

HauntU aims to create a thrilling and immersive survival experience by blending elements from successful games with innovative mechanics. By leveraging references like *20 Minutes Till Dawn*, *Left 4 Dead*, *Plants vs. Zombies*, *Papers, Please*, and *Stardew Valley*, the game will offer dynamic combat, strategic resource management, and engaging gameplay that will captivate players and keep them coming back for more.

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