A PROPOSED IMPLEMENTATION OF THE
GAME ABYSSAL RUINS FOR CHRONOBYTE STUDIOS

An Application Development and Emerging

Technologies Project Preseted to the

Faculty of Datamex College of Saint Adeline Inc.

In Partial Fulfillment of the Requirements for the

Degree of Bachelor of Science in Information Technology

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June 2024

Chapter 1

THE GAME AND ITS

BACKGROUND

THE GAME AND ITS BACKGROUND

This chapter includes the introduction, the background of the game, the audience, and the purpose of the game.

Introduction

"The successful free to play games are selling positive emotions, not content" – Nicholas Lovell.

In today's technology-driven world, the significance of games extends far beyond mere entertainment. As we explore more deeply into the realm of game development, it becomes evident that games nowadays serve a complex yet meaningful purpose within society. From nurturing creativity and problem-solving skills to providing a platform for social interaction and cultural expression, games play a significant role in shaping our lives and the society we lived in.

Computer games and video games have become very popular in children's and adolescents' lives and play a prominent role in the culture of young people. Games can now be played everywhere in technology-rich environments equipped with laptops, smart phones, game consoles, set-top boxes, and other digital devices.

The evolution of gaming has witnessed a memorable journey, transcending from simple pixelated graphics to immersive virtual worlds and revolutionary gameplay mechanics. Alongside this technological advancement, the societal significance of games has only grown, touching upon various aspects of human experience and development.

Besides of an abundant appearance of games in player's life, game development technology has matured and became more advanced than before. As an interdisciplinary field, game development requires some appreciation for both technicality and creativity. Game development nowadays is built- on digital media studies and electronic media arts .

One of the primary purposes of games is to provide entertainment and involvement. Whether it's through thrilling action sequences, immersive and captivating storytelling, or

competitive gameplay, games offer a way to escape reality temporarily and immerse themselves in various virtual adventures. This entertainment value not only provides moments of happiness and relief but also facilitates creativity and motivation for individuals.

In addition, games today have become a powerful tools for education and skill development. People nowadays can acquire new knowdge and skills in fun and interactive manner through gamified learning platforms and educational game. The latter have completely changed or revolutionized the way we approach learning, making it more interesting and accessible to all the users or players of all ages.

Beyond individual growth, games also play an essential role in promoting social connections and community involvement. Whether it's through multiplayer online games, esports competitions, or local gaming events, games unite people, bridging cultural differences and geographical bounderies. These shared experiences and entertainment not only strengthen bonds among individuals but also contribute to creating thriving and inclusive societies centered around common interests and passions.

In line with this, given our team's expertise and competence when it comes to building and developing games and entertainment, our project team is focusing on creating such games that are affordable and adaptable in pertaining to demands and needs.

Abyssal Ruins, a computer application game that provides entertainment, fun, and instant user-friendly techniques with an easy-to-use interface that provides a much-needed past time entertainment for the players, while luring them into their best selves in solving and winning this game.

It has a computer game target platform that has a GoDot 4 game engine with a collaboration of 2D platformer dungeon game with the genre of puzzle and adventure. In this game, the users or players must overcome the abyssal eyes that will hinder them each level, jump to different obstacles, merge wth the walls and solve puzzles in order to find Valiant's father and win this game.

It is a single-player computer game with the gameplay mechanic of using certain keys from the keyboard to control the movement of Valiant. In line with this, players must press the k button to merge with the walls. Another is that players must press the spacebar to jump over any obstacle they may encounter and activate mechanism such as buttons and wires. The

only thing players must do is find a way to avoid the abyssal eyes and reach the door at the end of each level within the limited time. We have also created other alternative keys for the control that will best suit the player of the game.

To conclude, the importance of games nowadays cannot be overstated. From entertainment and education to socialization and cultural expressions, games enhance our lives in countless ways, shaping the way players or users think, learn, and interact with the gamified world. As society today takes off on the journey of game development, users or players must recognize the extreme impact that games have on society and strive to create experiences that inspire, challenge, and unite players around the world.

Background of the Game

The synergy between two dominant global industries computer communication and gaming has garnered significant attention and analysis. As integral components of rapidly expanding global media cultures, gaming and computer media exhibit diverse adaptations at the local level. In regions with robust broadband infrastructure and a focus on collective experiences, online multiplayer games prevail. Conversely, in areas governed by convergent computer technologies, computer gaming platforms dominate.

The evolution of computer gaming presents an intriguing narrative for several reasons: it embodies a constant struggle between technological constraints and aesthetic preferences; it has mirrored the development of home game consoles and arcades in its progress and approach to these constraints; and it illustrates an ongoing desire for players or users to be able to play games anywhere, anytime.

The portability of handhelds has meant that these games are often played in public spaces, prompting designers to consider how sound design can enhance rather than disrupt gameplay. Games have evolved over generations, reflecting the dynamic connection of human ingenuity, culture, and technology. From our prehistoric digital world to the ancient Mesopotamian and Egyptian civilizations, games have developed from simple pastimes into complex, immersive worlds that entertain, inform, and unite people everywhere.

With advancements in technology, game complexity and variety have also increased. While text-based adventures like Zork captured the imagination of early computer users, role-playing games (RPGs) like Dungeons & Dragons combined storytelling with gameplay. Virtual

worlds, artificial intelligence, and cloud gaming have the potential to completely change how players play and engage with video games. Understanding this development is essential not only for acknowledging the cultural importance of games but also for exploring their potential applications in education, therapy, and other fields.

In line with this, the first computer game was launched in the early 1980s for a device called Simon, which included four colored buttons and a small LCD screen. In this puzzle game, players were required to reproduce sequences of colors and sounds after hearing them played by the machine.

In 1997, Nokia introduced its first handheld system called "Game Boy", which was compatible with 11 different games. It had a monochrome 12-bit display and could play roughly 20 minutes of gameplay on each battery charge. The Nintendo Game Boy was not the first handheld system, but it proved to be the most popular. The original model launched in 1989 performed poorly with color graphics and had low battery life compared to modern systems. This model was succeeded by a series of newer versions with improved technology and an increased number of games.

As time went on, applications increasingly borrowed models from video games in order to enhance user engagement. For instance, the Duolingo app combines language lessons with a leveling system in which users receive "hearts" for correct answers and lose them when they make mistakes. In this way, it is more like a game than a traditional learning tool.

Furthermore, the significance of diversity and inclusivity in game development is becoming increasingly recognized. In their games, developers are making an effort to depict a greater variety of opinions, cultures, and experiences. The "live services" model has gained popularity, where games are regularly updated with new features, content, and events. This promotes player interaction and enables developers to react to comments from users.

In the rapidly growing industry of computer gaming, driven by technology-driven society, our project team developed a game named "Abyssal Ruins". This game is created and optimized for computer devices and utilizes the GoDot 4 game engine to provide an engaging 2D platformer lexperience that combines the genres of dungeon, adventure, puzzle.

Quick summary of the plotline of the game "Abyssal Ruins" In the character of Valiant Ironclad, a knight from the discriminated Ironclad family, seeks to restore his family's honor by finding the lost dungeon, Abyssal Ruins. His father went on an expedition to find this elusive

dungeon but never return ina long time Valiant driven by his love for his father he decided to venture and find the Abyssal Ruins to rescue him.

Players will go through the mysterious dungeon while leading Valiant on this quest.. There are many obstacles along the way, such as the abyssal eyes that will hinder Valiant on exploring the dungeon each level will have more abyssal eyes with different positions and range that will make each level harder furthermore the player s will need to find the right path and merge with walls and activate mechanism to reach the door of each level before the timer runs up. The player must lead Valiant on this epic quest in order to determine the fate of the Ironclad bloodline and save his father from the deep depths of the dungeon. Like any other game, there is one moral lesson that players could get from the game's storyline, "perseverance and determination can overcome even the most daunting challenges.

Audience of the Game

Our project team's computer game, powered by the GoDot 4 Game Engine, offers an interesting and exciting experience set in a captivating gamified world. Players or users go into on a sensational adventure as Valiant Ironclad, a young knight determined to restore his family's honor and rescue his love one within the Abyssal Ruins. With its fun and simple gameplay and engaging storyline, our project team's Abyssal Ruins promises to deliver hours of much-needed entertainment and excitement for players of all ages and preferences.

Abyssal Ruins is designed to appeal to a diverse audience, offering gamers of all ages who have an interest in playing a game with a genre of adventure-action-survival and enjoy the thrill of dungeon-style gameplay. Whether a player is a seasoned gamer seeking a new challenge or just a casual player looking for past-time entertainment, our project team's game offers something for everyone. From exploring the mysterious dungeon players will find themselves captivated in a world brimming with excitement, discovery, mystery, and adventure.

Key Audience Features

1. **All Ages.** Abyssal Ruins is suitable for players of all ages who are capable of playing the game, offering gamified content that is accessible and enjoyable for both younger and older audiences alike. Whether a player is a child exploring their first dungeon or an adult seeking a past-time adventure, there's something everyone can enjoy.

2. **Adventure Lover.** For players or gamers who crave the excitement and thrill of adventure, Abyssal Ruins provides an alluring experience filled with exploration, discovery, and excitement. From uncovering hidden secrets to facing off against the abysal eyes , players will take off on an unforgettable gamified journey through a fascinating and vibrant world.

3. **Dungeon Style Fans.** If a player or gamer is an avid fan of dungeon-style games, our project team's game is sure to please that player's imagination with its game flow and challenging puzzles. Dive into the depths of Abyssal Ruins and test the player's skills against a variety of obstacles as they strive to progress in the game.

Overall, our project team's game, Abyssal Ruins, offers a thrilling and interesting experience that imparts to diverse tastes and preferences of adventure-seeking players or gamers across all ages of groups who are capable of playing it.
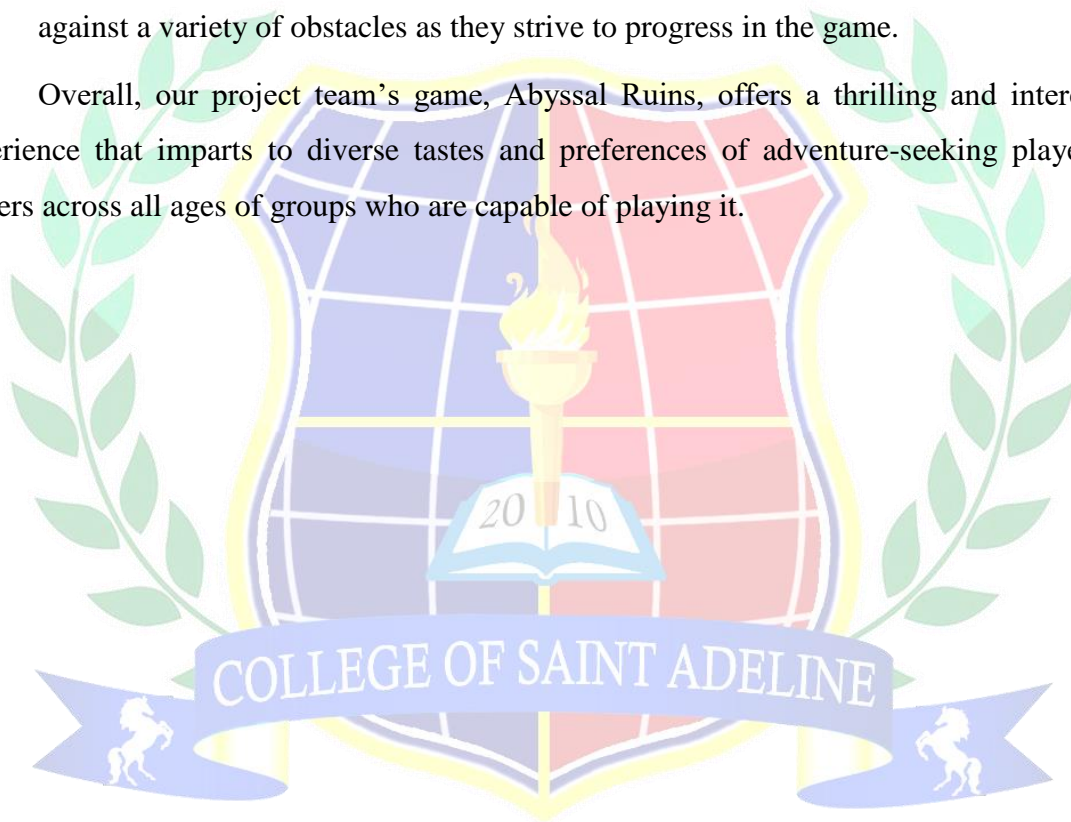
Purpose of the Game

In a technology-driven society nowadays, mobile gaming has become a significant part of entertainment and leisure activities for millions of players or users worldwide. With the rapid modernization of mobile devices and the accessibility of the internet, mobile gaming has evolved into a thriving industry, establishing a diverse range of gaming experiences right at players or users's fingertips. From casual puzzle games to intrusive multiplayer experiences, mobile gaming provides a convenient and accessible platform for players to engage with interactive content anytime, anywhere.

Abyssal Ruins is a cool dungeon game where you help Valiant Ironclad go through dungeons, face obstacles, and explore the dungeon to bring honor back to his family and save his father. The game mixes adventure and puzzle, making it enjoyable for everyone. Valiant's story is about saving gus father proving himself as a great knight, and players get to join him on this journey, experiencing highs and lows as they explore the hidden dungeon in the dark wood forest.

The game is made to be easy and enjoyable for all ages, with simple controls and a user-friendly design. Whether you're fighting monsters or navigating tricky spots, Abyssal Ruins aims to be a game that brings happiness and thrills to anyone looking for a good time on their mobile device. It's about the joy of overcoming challenges and having fun in the fantasy world of Abyssal Ruins.

Abyssal Ruins wants to be a game that anyone can enjoy, offering a straightforward and exciting gaming experience. The main goal is to bring smiles and excitement to players of all ages by exploring dungeons, dodging enemies, and achieving victory within the limited time in the mysterious dungeon Abyssal Ruins. Whether you're a seasoned gamer or just looking for some casual fun, this game is designed to be a delightful adventure on your computes.

The purpose of our project team's computer game, utilizing the GoDot 4 Game Engine, is to provide players with an fascinating and thrilling adventure experience. Set in a fantasy world , players assume the role of Valiant Ironclad, a courageous knight on a quest to restore his family's honor and save his father in the Abyssal Ruins. Through engaging gameplay mechanics and dynamic storytelling, the game aims to captivate players' attention and immerse them in a rich and vibrant game world.

Key Objectives of the Game

1. **Puzzle.** Players must navigate through mysterious environments, avoid hostile creatures, and overcome various obstacles to progress in the Abyssal Ruins. Strategic thinking is a msut the players must solve the levels and reach the door within the limited time limit or they will lose .

2. **Adventure and Exploration.** As players establish on Valiant Ironclad's epic journey, they'll take off on a thillimg with adventure. From traversing lush forests to delving ithe game encourages exploration of every stages of the Abyssal Ruins.

3. **Thriling Gameplay.** The game will give our players a fun and thrilling experience as they explore the Abyssal Ruins each levels will become harder as the player progress in the game furthermore the players must completer the level within the time limit to add more thrill and difficulty.

By combining elements of puzzle, and adventure within a computer, our project team's game aims to deliver a captivating and unforgettable gaming experience that resonates with players of all ages. Whether playing for a few minutes on the go or engaging themselves in our gameplay, players will find themselves drawn into a world filled with excitement, danger, and thrill.

Like any other dungeon game, there is one moral lesson that players could get from the game's storyline, "perseverance and determination can overcome even the most daunting challenges."

Throughout the game, Valiant Ironclad faces numerous obstacles, including discrimination against his family, the daunting task of finding the Abyssal Ruins, and losing his supplies in the dungeon. However, he persists in his quest, driven by his desire to restore his family's honor and love for his father. His determination ultimately leads him to success, demonstrating the power of perseverance in the face of adversity. This can inspire players to apply similar determination in their own lives, even when faced with numerous obstacles.

Chapter 2

GAME DESIGN

GAME DESIGN

This chapter includes the game's theme, synopsis, character design, environment design, and its storyboard.

Game Theme

Abyssal Ruins is a thrilling dungeon puzzle game that immerses players in the concepts of adventure. They stand for the courageous knight Valiant Ironclad on a quest to restore his familys name and saving his father. Raised in the once-revered Seraphine Kingdom, Valiant's family legacy had been tainted by false accusations of cowardice and dishonor, causing them to become outcasts. With the opportunity to of redeeming themselves Valiants father Varon Ironclad decided to find the Abyssal Ruins but fails to return , Valiant embarks on a perilous journey to save his father and reclaim his familys honor.

Valiant's journey into the depths of the abyssal ruins will be difficult given that he only has himself. The players guide him through the dungeon, by jumping and merging through walls to avoid abyssal eyes and obstacles furthermore he also need to solve puzzles by activating mechanism such the buttons and wires to explore the dungeon. Precise jumps and strategic thinking are required as the game becomes harder each level. As Valiant descends further into the abyss, more abyssal eyes and puzzles will appear that he needs to overcome..

Abyssal Ruins encompasses the essence of a dungeon/puzzle game with 2pd pixel art style set in a mysterious dungeonundefround. Players must learn to overcome difficult obstacles, and puzzles. The game's redemption theme is intricately woven into Valiant's perilous journey, with each leap and merge bringing him closer towards his father and saving their familys honor if they manage to come back to the kingdom they wil be regarded as the great knights as they are the first one to find and explore the Abyssal Ruins Dungeon.

Game Synopsis

Abyssal Ruins follows Valiant Ironclad, a knight determined to save his father and restore his family's honor by conquering the Abyssal Ruins dungeon in the Darkwood Forest. Armed with courage and their familys heirloom sword Valiant heads to the darkwood forest to find the dungeon entrance.

Players must assist Valiant as he navigates the dungeon, faces challenges, and solve each level to progress in the dungeon Once inside, they must help him past all the levels and find his father at the end of the game.

Character Design

This part is significant in creating the vibrant and complex world of Abyssal Ruins in our project team's proposed game. At the heart of our team's adventure lies the protagonist, Valiant Ironclad, whose unrelenting determination and courage drive the narrative of the story forward.

As the players assume the character and role of Valiant, they take on a journey of self-discovery and redemption, facing difficult obstacles and navigating mysterious dungeon along the way. Through particular character design, our project team aim to create and develop a protagonist who not only connects with players but also embodies the spirit of resilience and heroism in the face of adversity.

The following are the characters that the players will see playing our project team's Abyssal Ruins game;

Valiant Ironclad

Despite his noble-sounding name, Valiant Ironclad came from a family with a tarnished reputation. He's a brave knight who loves his family and idolizes his father. His name, Valiant, means possessing strength and courage.

Walking

Jumping

IDLE

Varon Ironclad

Valiant's kind father is doing everything he can to restore their family's reputation in the Seraphine Kingdom. He ventures alone to explore the abyssal ruins. His prolonged absence makes Valiant worried, and he tries to rescue him on his own.

The Abyssal Eye

The most notorious enemy in the abyssal ruins, sends anything that it sees back to the beginning, making exploration harder.

Storyboard

This part serves as a visual roadmap that higlights important sequences and scenes that drive its narrative forward. Each frame captures significant turning points in the protagonist's journey, providing insights into the complex and engaging story being told within our project team's game. From dramatic encounters with fearsome monsters to moments of triumph and discovery, the storyboard provides a window into the captivating world of Valiant Ironclad and his quest for redemption.

Frame:	Number 1
Narration:	In the kingdom of Seraphine, there lived a knight named Valiant Ironclad. Despite his noble title, his family has endured the burden of a tarnished reputation.
Visual:	
Action:	Valiant Ironclad stands tall in the kingdom of Seraphine, thinking about the tarnish reputation that burden his family.
Audio Sound FX:	A somber and melancholic melody plays softly in the background, underscoring the gravity of Valiant's situation and the burden he carries.
Dialogue:	"In the kingdom of Seraphine, my name is Valiant Ironclad. But my family bears the weight of a tarnished reputation."
Camera Shot:	Wide-shot focusing on Valiant, with the Seraphine kingdom behind him, struggle he faces as he carries the legacy of his family's tarnished reputation.
Lighting:	Soft lighting.

Emotional Response:	A sense of solemnity and introspection.

Frame:	Number 2
Narration:	From the moment he was born, whispers from the townsfolk of cowardice and shame haunted the Ironclad name. Rumors spread that their family had run away from the battlefield during dark times to save themselves, neglecting the kingdom.
Visual:	
Action:	Valiant Ironclad walks through the streets of Seraphine, surrounded by whispers and glances from the townsfolk, each one carrying the weight of the rumors that have plagued his family for generations.
Audio Sound FX:	The faint murmur of gossip and whispers fills the air, creating a sense of tension and unease as Valiant moves through the town.
Dialogue:	"From the moment of my birth, the whispers of cowardice and shame have followed the Ironclad name."
Camera Shot:	Close-up on Valiant's face, capturing the pained expression as he listens to the whispers and feels the weight of his family's tainted legacy, highlighting the emotional toll it takes on him.
Lighting:	Soft, diffused lighting.
Emotional Response:	A sense of sadness and frustration.

Frame:	Number 3
Narration:	His father, a proud knight, embarked on a perilous quest to reclaim their honor by diving into the treacherous Abyssal Ruins Dungeon. This dungeon remained unexplored for many years. It was said that within its depths lay a great deal of treasure that would bring significant contribution to the Seraphine Kingdom and help the Ironclads in restoring their family's dignity.
Visual:	
Action:	Valiant Ironclad watches with a heavy heart as his father, a proud knight, prepares to embark on the perilous quest into the Abyssal Ruins Dungeon. Though saddened by his father's departure, Valiant strengthens his resolve, determined not to burden his father with his emotions.
Audio Sound FX:	A poignant and emotive orchestral score plays softly in the background, reflecting the bittersweet moment as Valiant watches his father depart on the dangerous quest.
Dialogue:	"I must be strong for my father. His quest is our family's hope. I cannot burden him with my sadness."
Camera Shot:	A wide shot captures Valiant, filled with sadness, as he watches his father depart.
Lighting:	Soft and warm lighting.

Emotional Response:	A blend of sadness and determination.

Frame:	Number 4
Narration:	One fateful day, overhearing gossip among his superiors, Valiant learned of his father's prolonged absence.
Visual:	
Action:	Taken aback, Valiant Ironclad overhears gossip among his superiors about his father's prolonged absence, realization dawning upon him.
Audio Sound FX:	A sudden shift in the soundtrack, with ominous tones underscoring the gravity of the news and Valiant's growing concern for his father.
Dialogue:	"My father... how long has he been gone?"
Camera Shot:	Close-up on Valiant's face, capturing the shock and concern in his eyes as he processes the news, highlighting the emotional turmoil he experiences upon learning of his father's prolonged absence.
Lighting:	Dim Lighting.
Emotional Response:	A mix of shock and concern.

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Frame:	Number 5
Narration:	Disregarded as a coward, his father's disappearance brings little concern from the kingdom. Despite his anger, Valiant endures and continues listening. One of his superiors mentions that his father was last seen in the DarkWood Forest, where the elusive Abyssal Ruins are located.
Visual:	
Action:	Valiant Ironclad, filled with anger but determined to uncover the truth, continues to listen as one of his superiors mentions that his father was last seen in the Darkwood Forest, where the elusive Abyssal Ruins are located.
Audio Sound FX:	Tense and suspenseful music intensifies, reflecting the growing urgency and determination in Valiant's quest to find his father.
Dialogue:	"Last seen in the Darkwood Forest... I will find him, no matter the cost."
Camera Shot:	Wide shot capturing Valiant expressing anger toward his superior.
Lighting:	Dim Lighting.
Emotional Response:	A surge of anger and determination.

Frame:	Number 6
Narration:	Fueled by love and duty, Valiant Ironclad's resolve strengthens as he commits to rescuing his father himself, fully aware that he cannot rely on anyone else for assistance. Stirring and heroic music rises in the background, echoing the determination and bravery propelling Valiant forward on this perilous quest alone.
Visual:	
Action:	Valiant Ironclad, fueled by love and duty, resolves to rescue his father himself, knowing that he cannot rely on anyone else for assistance.
Audio Sound FX:	Stirring and heroic music rises, reflecting the determination and bravery driving Valiant's decision to embark on this perilous quest alone.
Dialogue:	"I will rescue my father, no matter the danger. I cannot wait for aid that may never come."
Camera Shot:	Medium shot focusing on Valiant's rushing home to prepare for his journey and capturing his determined expression.
Lighting:	Soft, warm lighting.
Emotional Response:	A surge of admiration and respect.

Frame:	Number 7
Narration:	With urgency and determination, Valiant Ironclad rushes home to make preparations for his journey.
Visual:	
Action:	Valiant Ironclad rushes home to make preparations for his journey. He stocks up on supplies such as food and potions, but most importantly, he grabs their family's heirloom sword.
Audio Sound FX:	Energetic and determined music plays in the background, mirroring Valiant's urgency and determination as he prepares for his journey.
Dialogue:	(Internal monologue) "I must be prepared for anything. Our family's sword will guide me on this quest."
Camera Shot:	Wide Shot showing Valiant's gathered supplies and him reaching and grabbing their family's precious heirloom sword.
Lighting:	Bright lighting to emphasize Valiant's Courage as he prepares for his journey.
Emotional Response:	A mix of excitement and determination.
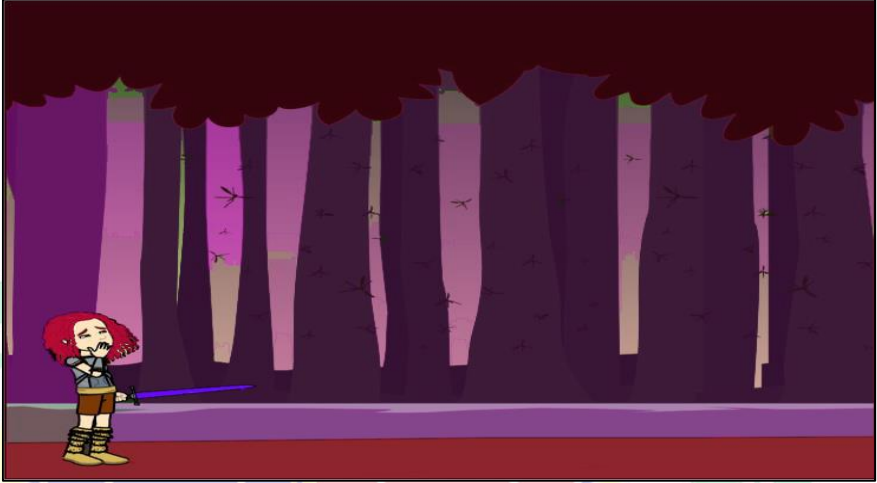
Frame:	Number 8
Narration:	Armed with only his family's enchanted Blue Sapphire Sword and fueled by fierce determination, Valiant bids farewell to his mother, a solemn moment tinged with the weight of his mission. As he ventures into the ominous Darkwood Forest, where the Abyssal Ruins supposedly lay hidden.
Visual:	
jAction:	Armed with only his family's enchanted Blue Sapphire Sword and fueled by fierce determination, Valiant bids farewell to his mother and ventures into the ominous Darkwood Forest, where the Abyssal Ruins supposedly lay hidden.
Audio Sound FX:	Solemn and adventurous musical score, amplifying the sense of foreboding and determination as Valiant embarks on his journey.
Dialogue:	"Farewell, Mother. With our family's sword as my guide, I will brave the Darkwood Forest and uncover the truth behind my father's disappearance."
Camera Shot:	Wide shot capturing Valiant's saying farewell to his mother as he goes to the Darkwood Fores to save his father.
Lighting:	Soft, diffused lighting.
Emotional Response:	A mixture of determination and apprehension.

Frame:	Number 9
Narration:	Valiant keeps his hopes high and persists in searching for his father, despite the weariness weighing heavily on his body.
Visual:	
Action:	Days turned to weeks, and weeks to months as Valiant scoured every inch of the forest, his hope waning with each passing moment.
Audio Sound FX:	Somber and melancholic melody, echoing Valiant's dwindling hope and growing frustration as he searches fruitlessly.
Dialogue:	(Internal monologue) "How much longer must I search? My hope fades with each passing day."
Camera Shot:	Wide shot of Valiant trudging through the forest, his weary figure framed against the backdrop of dense trees, emphasizing the vastness of his search and the weight of his frustration.
Lighting:	Dim, muted lighting with gloominess.
Emotional Response:	A sense of weariness and frustration.

Frame:	Number 10
Narration:	Suddenly, a glimmer of hope emerges as Valiant stumbles upon a hidden entrance beneath an old tree stump, his campsite.
Visual:	
Action:	Valiant walks to the hidden entrance and falls leading him in the underground tunnels towards the abyssal ruins and lost his supplies except for his sword.
Audio Sound FX:	Eerie and mysterious sounds .
Dialogue:	(Internal monologue) "Lost my supplies, but I will not lose hope. I must press on."
Camera Shot:	Wide shot capturing Valiant approaching the hidden entrance.
Lighting:	Dim and ominous lighting.
Emotional Response:	A combination of determination and cautious curiosity.

Frame:	Number 11
Narration:	Valiant Ironclad finally found the Abyssal Ruins after months of searching.
Visual:	
Action:	After falling for some time, Valiant finally comes to a stop and looks around, finding himself in a strange place. He notices some strange creatures lurking and the structure of the place feels really odd that's when he realized he finally arrive in the Abyssal Ruins.
Audio Sound FX:	Ominous and mysterious sounds fill the air.
Dialogue:	(Internal monologue) "Strange eyes, lurking monsters... This must be it. The Abyssal Ruins."
Camera Shot:	Wide shot capturing Valiant's bewildered expression as he takes in the sights of the strange place, emphasizing the surreal and mysterious nature of the Abyssal Ruins.
Lighting:	Dim and eerie lighting.
Emotional Response:	A mix of fear and determination.

Frame:	Number 12
Narration:	As Valiant Ironclad finally found the Abyssal Ruins, he wandered through the place with great determination, hoping to find his beloved father.
Visual:	
Action:	Standing amidst the shadows of the ruins, Valiant feels the weight of destiny upon him. With courage as his shield and honor as his blade, he embarks on the final leg of his journey, ready to confront whatever darkness awaits him and rescue his father from the depths, restoring their family's honor.
Audio Sound FX:	A stirring and heroic orchestral score rises, underscoring the gravity of the moment and the determination in Valiant's resolve as he prepares for the final confrontation.
Dialogue:	(Internal monologue) "This is the moment I've been destined for. With courage as my shield and honor as my blade, I will rescue my father and restore our family's honor."
Camera Shot:	Medium Shot capturing Valiant's determined expression, his eyes shining with resolve as he prepares to face the challenges ahead, emphasizing the bravery and determination that drives him forward.
Lighting:	Soft, warm lighting.
Emotional Response:	A surge of admiration and anticipation.

Environment Design

In the intricate tapestry of our project team's mobile game set within the enchanting world of the Abyssal Ruins, this part plays a vital role in developing an immersive experience for players. From lush forests teeming with life to ancient ruins steeped in mystery, each environment is meticulously crafted to evoke a sense of wonder, adventure, and discovery. These are the environments that the players will see playing the Abyssal Ruins.

Seraphine Kingdom

A kingdom surrounded by beautiful mountains and lush green trees, it boasts a majestic castle standing tall upon a hill. Protected by brave knights, the kingdom is famous for its breathtaking scenery. The moon shines dazzlingly over the kingdom every night.


DarkWood Forest

An ominous forest with eerie surroundings, a purple fog always shrouds this forest. Dark wooden trees and red-tinted plants cover its landscape. It is said that the entrance to the Abyssal Ruins is located deep within this forest.

Abyssal Ruins
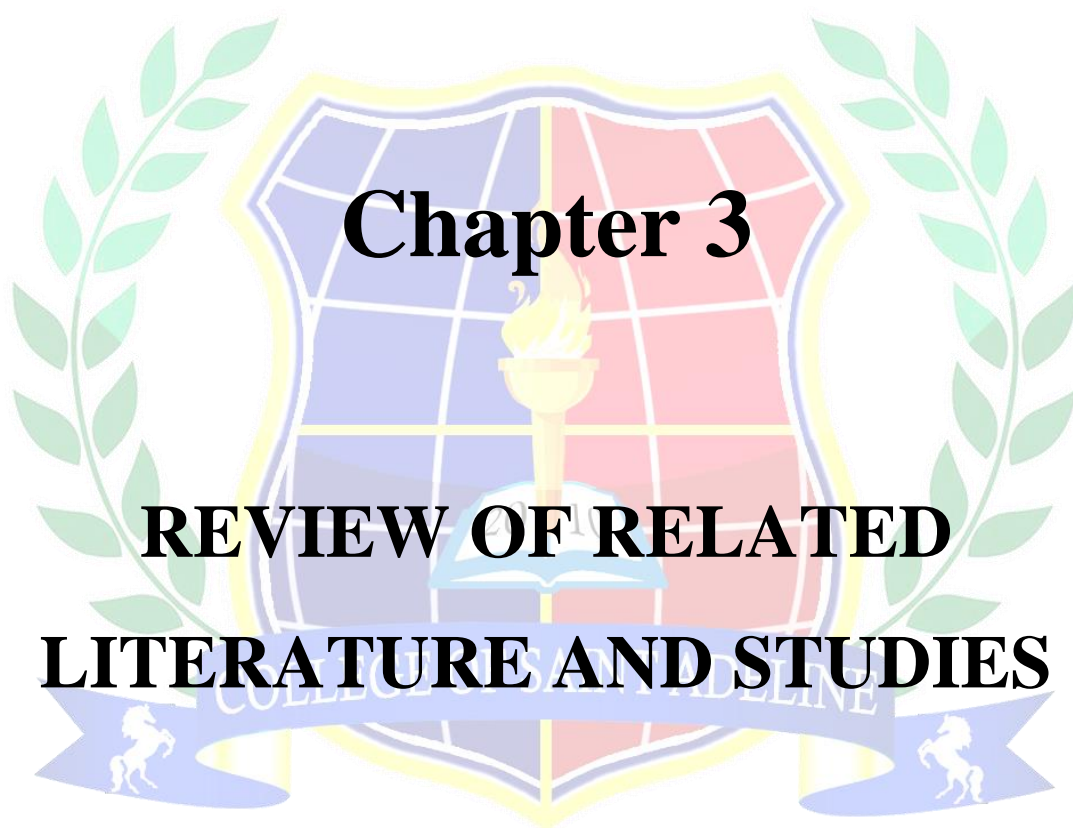
An unexplored dark cavern dungeon located deep underground, it is said that for many, many years, this dungeon has remained unexplored, shrouded in mystery. The dungeon's odd walls seem to allow one to merge with them, and its dark surroundings are inhabited by strange creatures known as the Abyssal Eyes, lurking within every corner.
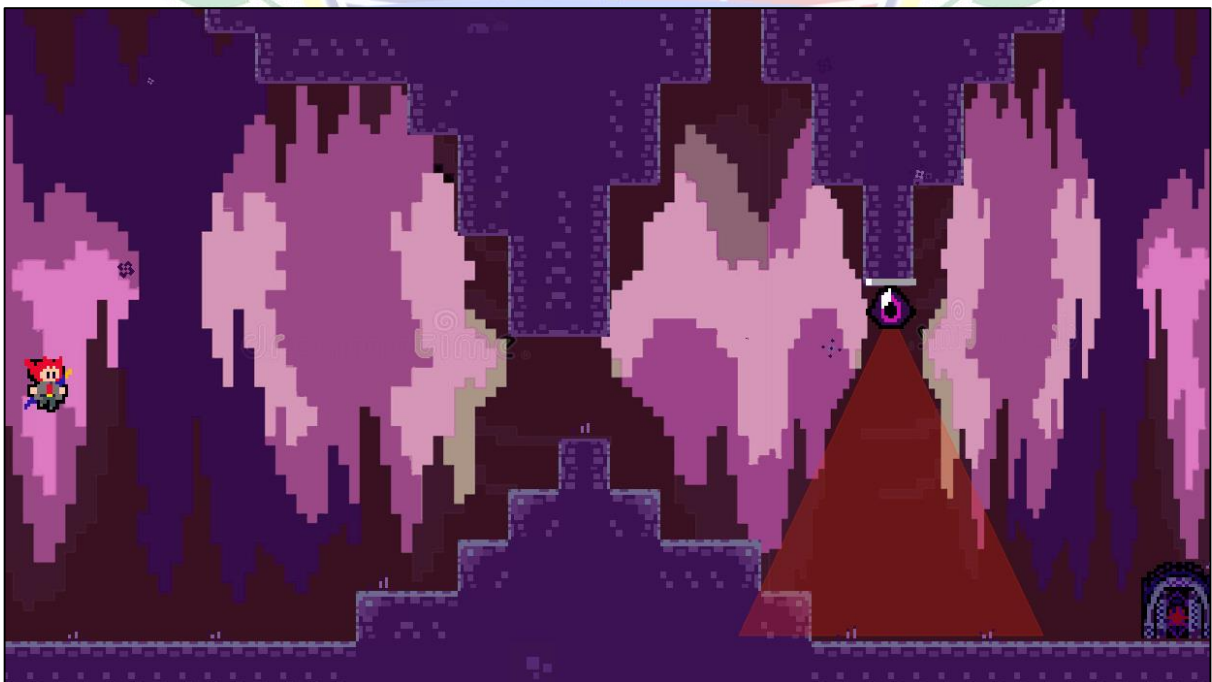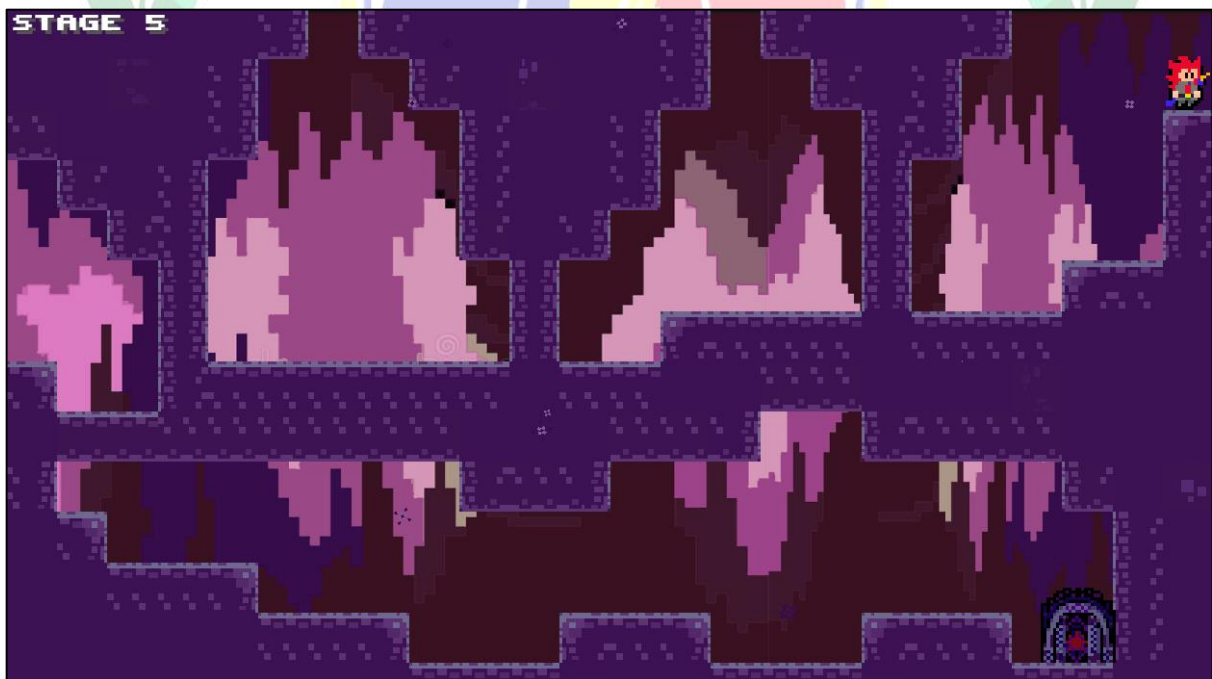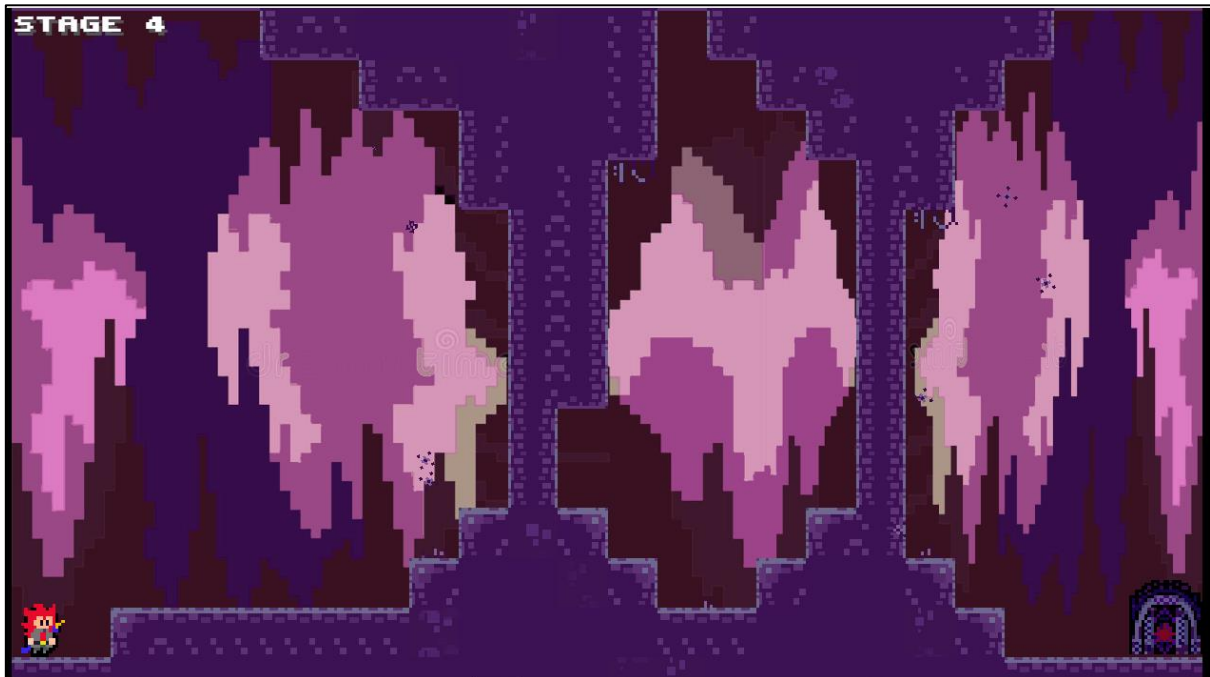
Chapter 3

REVIEW OF RELATED LITERATURE AND STUDIES

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This review presents the relevant literature and studies after the thorough and in-depth search done by the project team. This will show a recap of the findings from earlier studies in relation to the dungeon-themed games. This will also present the synthesis of the study to fully understand the game to be played.

Procedural Dungeon Generation

Developing a dungeon-themed for computer-based game procedures is rampant nowadays, as it can be a more entertaining and joyful for the modern players in today's gaming era.

Procedural Content Generation (PCG) is a method of content creation entirely or partially done by computers. PCG is popularly employed in game development to produce game content, such as maps and levels. According to Togelius et al. (2016), PCG is defined as computer software capable of creating game content on its own, or together with one or many human playersor designers.

Over the years, PCG has become a valuable asset for the game development process because it may bring several benefits, such as reducing the high cost of production of game features by reducing the need for human designers to generate content, helping human designers to increase their creativity and productivity, controlling the game difficulty, helping with game balancing, or both, and increasing the play value of a game by providing unexpected content, for instance.

Dungeon-level generation in games is a great example of how PCG can be very useful, particularly when it supports the creation of different dungeons every time the game is replayed. In 2014, Van der Linden et al. published a survey on Procedural Dungeon Generation (PDG). They compared different approaches to content generation and tried to understand how control works in the surveyed methods. However, they did not attempt to classify the methods under a unified taxonomy.

According to Van der Linden et al. (2014), dungeons are labyrinthine environments mostly composed of rewards, challenges, and puzzles, distributed over the level to offer highly structured gameplay progressions. Several games of different genres use dungeons in some

parts, e.g., *Pokémon (Nintendo, 1996)*, or the entire game, e.g., *The Binding of Isaac (McMillen and Himsl, 2011).*

In conclusion, this review indicates that there is a clear preference for evolutionary algorithms for generating dungeon levels. This behavior probably happens due to the high number of constraints that are involved in this process. In terms of dungeon content, few papers presented solutions for dungeons as defined by van der Linden et al. (2014). However, the main problem is that puzzle generation itself is a very complicated challenge (De Kegel and Haahr, 2019).

Mixed-Initiative Evolutionary Dungeon

Mixed-initiative systems, which highlight the mutually beneficial interaction between human creativity and computing power, mark a revolutionary change in the field of game design. Through the utilization of both players' advantages, these systems stimulate the development of increasingly complex and interesting gaming environments.

The integration of mixed-initiative tools appears as a glimpse of hope as the gaming industry challenges with rising development costs. It provides a way to both reduce costs and stimulate the creativity of game designers across the world.

Leading this advancement is the Evolutionary Dungeon Designer (EDD), a modern mixed-initiative tool that uses evolutionary computation to produce game material autonomously while following pre-established design patterns. Like any creative company, EDD is not without flaws, though. Results from an extensive user survey identified areas where the tool's functioning may be improved.

EDD operates through iterative cycles of generation, evaluation, and refinement. Initially seeded with a set of design parameters and constraints supplied by the user, the system employs evolutionary algorithms to generate a diverse array of dungeon layouts, enemy placements, and environmental elements. These generated designs are then evaluated against a predefined fitness function, which quantifies their adherence to design patterns and player experience criteria. Through the process of natural selection, the most promising designs are selected for further refinement, while less optimal solutions are discarded or subject to mutation.

Furthermore, EDD is a platform for experimentation and exploration as well as a tool for content creation. EDD gives designers the ability to explore new design spaces, find

unexpected emergent behaviors, and iterate towards enhanced gameplay experiences by exposing users to a differed variety of produced designs and facilitating quick iteration.

To sum up, the Evolutionary Dungeon Designer (EDD) is demonstration of the transformational possibilities of mixed-initiative design in the game industry. EDD provides a continuously flexible, iterative, and democratized vision of game content development by integrating human creativity with technological effectiveness. Tools like EDD will become more and more important in influencing the interactive entertainment scene as the gaming industry develops, enabling designers to push the envelope of innovation.

Assessing Aesthetic Evolutionary Dungeon Designer

At the center of mixed-initiative technologies, Evolutionary Dungeon Designer (EDD) provides adventure game developers with an effective framework for creating entertaining dungeon experiences. EDD facilitates communication between designers and procedural content generation (PCG) algorithms by improving the content development process with a combination of creative thinking and artificial intelligence.

Potential results from a recent user research involving game creators demonstrate the effectiveness of EDD in promoting relationships between human designers and PCG ideas. The tool was commended by participants for its capacity to accelerate the game production process and foster creativity in dungeon construction.

Nevertheless, prior versions of EDD have pointed up an important area that needs to be improved: the evaluation of aesthetic standards in its PCG Engine. The program does a good job of creating playable dungeon layouts and gameplay features, but it is not very good at assessing the aesthetic and thematic consistency of the stuff it generates. To fully realize EDD's potential as an all-inclusive mixed-initiative tool for game design, this constraint must be addressed.

To summarize this article, the Evolutionary Dungeon Designer (EDD) is an innovative product that will help bring mixed-initiative design to the gaming industry. Through developing a connection between algorithmic efficiency and human innovation, EDD enables designers to take full advantage of PCG algorithms' computational power while allowing them to express their ideas. Game developers still dedicated to creating a mutually beneficial partnership between intelligent systems and human designers as they develop and enhance EDD's capabilities, opening the door for a fresh chapter of inventiveness and ingenuity in the game design industry.

Darkest Dungeon

Darkest Dungeon is a roguelike role-playing video game created and published by Red Hook Studios. The game was released for Microsoft Windows and OS X in January 2016, after ayear of early access development. Later that year, it was released for the Play Station 4, Play Station Vita, and Linux, with an iOS port released in 2017 and Nintendo Switch and Xbox One ports released in 2018.

Darkest Dungeon is distinguished by its dark Gothic setting and atmosphere, which are bolstered by ominous cinematics and stressful gameplay, all accompanied by a ruthless narration. In the world of Darkest Dungeon, corruption and monsters have escaped the forgotten darkness of the deep and overrun the once idyllic Estate of the player's late ancestor.

A member of an ancient noble family. As if being plagued by disease and misery wasn't enough, the impoverished Hamlet's people must now deal with unimaginable nightmares that roam the land. The Ancestor himself was the source of this evil, having meddled with dark forces in pursuit of immortality after a lifetime of perverse debauchery and unleashing a nightmarish power buried far beneath his mansion.

Lastly appalled by his actions and repentant, the Ancestor took his own life and left the Estate to the player, urging them to rid it of the slavering horrors that now roam freely. The player is not alone, however; word of the player's mission and the Estate's lost treasures has spread far and wide, stimulating the interest of steadfast warriors, arcane devotees, and opportunistic rogues willing to brave the Estate's dungeons.

In conclusion, Darkest Dungeon is a landmark to the strength of challenging gameplay and captivating storytelling in the genre of roguelike role-playing games. The game, created by Red Hook Studios, takes players to a pessimistic and horrific world where previous crimes reappear as terrifying monsters that pose a threat to everything in their path. In essence, Darkest Dungeon is more than just a game; it is a journey into the depths of the human psyche, where courage and despair collide in a battle for survival. As players confront their inner demons and the horrors that lurk in the shadows, they will be tested like never before, emerging stronger and wiser—or consumed by the darkness that threatens to engulf them.

Roguelike Dungeon with Deluged Novelty Search

The landscape of virtual environments is evolving rapidly, fueled by a growing demand for differentiation and dynamism. As players increasingly seeking for unique and engaging experiences, developers face huge pressure to deliver content that is not only visually

stunning for the players or gamers but also dynamically generated to maintain freshness over time. Procedural Content Generation (PCG) has emerged as a powerful tool in this part, enabling developers to create interesting and diverse virtual worlds efficiently. However, the effectiveness of PCG hinges on the ability to balance quality and diversity, ensuring that generated content resonates with users while offering novelty and variety.

Dynamic content generation has become necessary in response to the growing need for unique virtual worlds. The goals of this process are to reduce production costs, speed up development, and extend product shelf life. Worlds created procedurally have shown to be a feasible approach, providing a wide range of environmental elements and experiences that may be modified without compromising speed.

Numerous studies in multiple virtual environments show that the researcher's method is efficient in generating varied and high-quality material. Their strategy regularly produces user-preferred solutions with more variation in gameplay mechanics, environmental features, and overall experience when compared to baseline approaches. Moreover, developer's method smoothly adjusts to user preferences, dynamically modifying the morphological niche distribution to match changing design goals. These findings highlight morphological niches' potential as an effective technique for improving procedural content creation in virtual environments.

The findings shows that the method laid out in this study provides a convincing answer to the problems associated with procedural content creation in virtual environments. Their method meets the changing demands and tastes of users by utilizing the power of morphological niches to ensure that generated material is both diversified and of high quality.

The researchers have proven our technique's superiority over current approaches through empirical evaluations, underscoring its potential to completely change the creation and satisfaction of virtual environments. Morphological niches have the potential to be significant for determining procedural content generation in the future as the need for unique and dynamic content grows. This will allow developers to construct exciting virtual worlds that capture viewers all over the world.

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Graph-Based Generation of Action-Adventure Dungeon Levels

In action-adventure games that provide players an exciting yet challenging experience, dungeon level design is vital. But manually designing these levels can take a lot of energy and time, which often results in boring or uninspired designs. In order to overcome this difficulty, researchers and developers have automated the dungeon development process through the use of procedural content generating tools.

In this study, game developers present a new declarative constraint solution paradigm— answer set programming, or ASP—for dungeon construction. Their method allows to generate acyclic dungeon layouts that have a high degree of controllability and flexibility, while adhering to specific gameplay criteria, by expressing dungeon levels as graphs and formulating design restrictions as logical rules.

The basis of the developer's dungeon development technique is the application of ASP, an effective framework for addressing sequential optimization issues. Dungeon levels are represented as directed graphs, where rooms and other places are represented by nodes, and connections or routes between them are represented by edges.

Game developers can systematically construct dungeon layouts that satisfy a wide range of criteria, such as monster placements, item distribution, player progression, and lock-and-key systems, by encoding gameplay and design constraints as logical rules in ASP. Because ASP is declarative language, they can express intricate relationships and dependencies in a clear and understandable way, which speeds up the process of iterating and improving dungeon designs.

Empirical evaluations of the developer's approach demonstrate its effectiveness in generating high-quality dungeon levels that meet specified gameplay and design constraints. By utilizing ASP's constraint solving capabilities, they are able to produce acyclic dungeon layouts with correct lock-and-key structures, ensuring a balanced and engaging player experience.

Furthermore, the game developer's approach offers a high degree of controllability, allowing developers to fine-tune various aspects of dungeon generation to suit their preferences and design goals. Overall, the results highlight the potential of graph-based generation using ASP as a powerful tool for automating the creation of action-adventure dungeon levels.

Synthesis of the Study

Procedural content generation, or PCG, has become a game development industry standard for producing dynamic and entertaining game experiences. The combination of multiple research works on creative dungeon creation, mixed-initiative evolutionary dungeon planning, and graph-driven production of action-adventure dungeon levels delivers significant perspectives on the dynamic field of game design and development.

PCG gives game developers a way to more creatively and affordably produce a wide range of high-quality game content, like levels and maps, all while reducing production expenses. Innovative tools such as the Evolutionary Dungeon Designer (EDD) are the outcome of the effective integration between human innovation and technological effectiveness through the application of evolutionary algorithms and mixed-initiative systems.

EDD uses algorithmic evolution to establish game content on its own and to help designers and procedural content creation algorithms work together. EDD enables designers to discover developing behaviors, engage with new design spaces, and improve gameplay experiences through iterative cycles of creation, evaluation, and refinement.

In addition, the use of descriptive constraint solving paradigms in graph-based generation, like Answer Set Programming (ASP), allows action-adventure dungeon levels to be systematically generated while meeting predetermined gameplay requirements. A balanced and interesting player experience can be guaranteed by developers constructing acyclic dungeon layouts using appropriate lock-and-key structures by specifying dungeon levels as directed graphs and defining design restrictions as logical rules. Developers can adjust numerous aspects of dungeon production due to the controllability and flexibility provided by ASP, which improves the quality and range of produced content.

The summarization of these studies illustrates how productive content creation in game development has the ability to alter the industry. Through taking advantage of artificial intelligence techniques like declarative constraint solving, mixed-initiative systems, and evolutionary algorithms, game creators may develop dynamic and interactive gaming experiences that involve players and inspire new levels of creativity. The future of game design and development will be significantly shaped by the use of these innovative methods, enabling

designers to produce interesting and memorable gaming experiences for gamers all around the world as the gaming industry progresses.

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