A Tank Fight Game

A Project Work

Submitted By

Ashmit Bhardwaj (22BCG10045) Albin John (22BCG10008) Pulkeet Singh (22BCG10011) Ayush John (22BCG10051)

In partial fulfilment for award of the degree of

Bachelor of Engineering

In
Computer Science Engineering (Graphics &
Gaming)



Jan-May 2024

Abstract

This research paper navigates the development journey of "A Tank Fight Game," a post-apocalyptic video game designed to address a void in the gaming industry. The exploration begins with an identification of the gap in post-apocalyptic narratives, establishing the need for an emotionally resonant gaming experience. A thorough literature review draws from various sources, shaping the cultural and narrative foundation of the game. The intricate design flow and methodology are unveiled, elucidating key decisions in character design, game mechanics, and visual aesthetics. Result analysis and validation meticulously scrutinize the game's functionality and reception, ensuring alignment with the identified problem. The conclusion summarizes key discoveries, emphasizing the project's significance, and proposes avenues for future research and development. "A Tank Fight Game" stands as a testament to addressing industry gaps, creating a compelling post-apocalyptic narrative, and contributing to the evolving landscape of video game storytelling.

Table of Content

Introduction01

S.No.	Description	Page No.
1.	Identification of Client	1-2
2.	Identification of Problem	2-3
3.	Identification of Task	3-4
4.	Methodology	5-6
5.	Timeline	6
6.	Team Roles	7

1. INTRODUCTION

In the ever-evolving landscape of video game design, the intersection of narrative depth, immersive mechanics, and visual aesthetics is paramount in crafting experiences that resonate with players. This research paper delves into the development features and distinctive elements that define "A Tank Fight Game," a post-apocalyptic game poised to stand out within the genre.

The post-apocalyptic setting has long been a fertile ground for narrative exploration in video games. "A Tank Fight Game" seeks to redefine this landscape by intertwining compelling storytelling with innovative game mechanics, offering players an unparalleled journey through the remnants of a world ravaged by nuclear catastrophe.

1.1. Identification of Client /Need / Relevant Contemporary issue

1.1.1. Justification of the Issue:

The justification for the chosen issue lies in the evolving expectations of modern gamers. While the post-apocalyptic genre has been a staple, there is a growing desire for narratives that explore the emotional dimensions of the human experience in such dire circumstances. "A Tank Fight Game" seeks to address this demand by delving into the intimate aspects of loss, family, and survival, offering players a fresh and emotionally charged perspective within the post-apocalyptic gaming landscape. This approach aligns with the evolving tastes of contemporary gamers, who increasingly seek depth, complexity, and emotional resonance in their gaming experiences. The justification is grounded in the understanding that a more human-focused narrative can elevate the gaming experience, fostering a deeper connection between the player and the game world.

1.1.2. Client/Consultancy Problem Statement:

The primary challenge faced by the client and consultancy team revolves around the need to develop a post-apocalyptic video game that not only stands out within a saturated market but also resonates with the evolving preferences of the gaming community. The challenge encompasses several key aspects:

- i. Market Saturation
- ii. Player Engagement
- iii. Innovation in Gameplay Mechanics
- iv. Narrative Depth
- v. Technical Challenges

1.1.3. Need Justification:

The need arises from a discernible gap in the market for post-apocalyptic games that prioritize individual narratives and character development over broader societal collapse narratives. There is a growing demand among players for experiences that evoke a strong emotional connection, where the game world serves as a canvas for a deeply personal exploration of loss, survival, and hope.

1.1.4. Relevant Contemporary Issue in Game Development:

One of the most pressing contemporary issues in the realm of game development revolves around the ethical considerations and societal impacts of virtual worlds and interactive narratives. As video games continue to evolve into complex, immersive experiences with far-reaching consequences, developers grapple with the responsibility of addressing and mitigating potential ethical concerns.

1.2. Identification of the Problem:

As we embark on the development journey of "A Tank Fight Game," it is imperative to acknowledge and address the ethical considerations inherent in crafting a post-apocalyptic gaming experience. Ethical challenges, both potential and actual, can emerge at various stages of development, impacting the portrayal of characters, and the overall player experience. Identifying and proactively addressing these ethical concerns is vital for ensuring a responsible and impactful contribution to the gaming landscape.

1.2.1. Educational and Cultural Implications:

As the development of "A Tank Fight Game" progresses, it is essential to recognize the potential educational and cultural impacts that the game may have on players and broader society. Beyond entertainment, video games possess the capacity to influence attitudes, foster learning, and contribute to cultural narratives. Identifying and understanding these implications is crucial for aligning the game with positive educational outcomes and cultural enrichment.

1.2.2. Narrative Gaps and Missed Connections:

As the development of "A Tank Fight Game" progresses, it is crucial to assess potential narrative gaps and missed connections that might impact the coherence and impact of

the storytelling. Identifying these aspects early on allows for strategic adjustments to enhance the overall narrative flow, character development, and player engagement.

1.2.3. Untapped Market Potential:

"A Tank Fight Game" possesses untapped market potential by catering to niche genre enthusiasts who appreciate narrative-driven and survival experiences. Its rich storytelling, emotional engagement, and exploration elements appeal to gamers seeking distinctive, immersive gameplay. With cross-platform accessibility, the game broadens its reach, ensuring it caters to players across various devices. Embracing inclusive representation, "A Tank Fight Game" targets an audience actively seeking diversity in character narratives. Leveraging crossover appeal with related entertainment mediums, sustainable development practices, and community-building features, the game positions itself as a versatile and socially conscious title, poised to captivate a diverse and expansive player base.

1.3. Identification of Tasks:

1.3.1. Task Differentiation:

Task differentiation is a critical aspect of the development process for "A Tank Fight Game," ensuring that distinct tasks are identified and assigned based on the specific skills and expertise of team members. The following tasks are differentiated to streamline the development workflow:

a. Game Design:

- Responsibilities: Conceptualizing gameplay mechanics, defining the narrative structure, and outlining level design.
- Assigned to: Harry, the lead game designer, leveraging his extensive experience in game jams and ideation.

b. Programming:

- Responsibilities: Implementing game mechanics, ensuring smooth functionality, and addressing technical challenges.
- Assigned to: The programming team, led by experienced developers, leveraging their proficiency in coding and software development.

c. Art and Animation:

• Responsibilities: Implementing game mechanics, ensuring smooth functionality, and addressing technical challenges.

• Assigned to: The programming team, led by experienced developers, leveraging their proficiency in coding and software development.

d. Narrative Development:

- Responsibilities: Crafting the main storyline, developing character backgrounds, and ensuring cohesive narrative flow.
- Assigned to: A collaborative effort involving the game designer, writers, and the creative director, leveraging their expertise in storytelling.

e. User Interface Design:

- Responsibilities: Designing an intuitive and visually appealing user interface for menus, HUD elements, and player interactions.
- Assigned to: The UI/UX design team, led by professionals with expertise in creating user-friendly interfaces.

f. Project Management:

- Responsibilities: Overseeing the overall project, coordinating tasks, and ensuring timely delivery.
- Assigned to: A dedicated project manager, responsible for keeping the development process organized and on schedule.

1.3.2. Framework of the Report:

1.3.2.1. Chapter Structure:

The project report will adopt a structured format akin to a research paper, ensuring coherence and a logical flow aligned with the project's chronological development phases.

1.3.2.2. Content Mapping:

This condensed structure maintains a logical flow, ensuring that the report is concise yet covers all essential aspects of the project's development. Each chapter aligns with specific phases of the project, offering a comprehensive overview within the given framework.

1.4. Methodology:

1.4.2. Introduction and Problem Identification:

• Objective:

Introduce the project and identify the gap in post-apocalyptic gaming narratives.

• Methods:

Review existing games, analyze player feedback, and identify thematic shortcomings.

1.4.3. Literature Review and Cultural Foundation:

• Objective:

Establish a culturally rich foundation for "A Tank Fight Game."

• Methods:

Explore post-apocalyptic literature, cinematic works, and cultural allusions.

1.4.4. Design Flow and Conceptualization:

• Objective:

Develop an intricate design flow for the creation of "A Tank Fight Game."

• Methods:

Conceptualize game mechanics, characters, and visual aesthetics. Implement an agile development framework.

1.4.5. Prototype Development and Iteration:

• Objective:

Develop a prototype, gather feedback, and iterate.

• Methods:

Build a functional prototype, conduct playtests, and iterate based on user experiences.

1.4.6. Full-Scale Development and Integration:

Objective:

Execute the full-scale development of "A Tank Fight Game."

• Methods:

Implement finalized design and narrative elements, collaborate with specialized teams, and address challenges.

1.4.7. Result Analysis, Validation, and Conclusion:

• Objective:

Assess the functionality, user reviews, and overall reception of the completed game. Summarize key findings and propose directions for future research and development.

• **Methods:** Conduct alpha and beta testing, analyze user feedback, validate design decisions, and reflect on achievements. Summarize discoveries and suggest avenues for continued development.

1.5. Timeline:

PROCESS	JAN	FEB	MARCH	APRIL
CONCEPTUALIZATION	25-30			
DEVELOPMENT		30-28		
TESTING			2-9	
FINALIZATION			10-20	
FRAMEWORK			21-28	
DOCUMENTATION AND REPORTING				29-5

1.6. Team Roles:

Member Name	UID	Primary Role	Secondary Role
Ashmit Bhardwaj	22BCG10045	Programming	Project Management
Albin John	22BCG10008	Game Design	User Interface Design
Pulkeet Singh	22BCG10011	Art and Animation	Narrative Design
Ayush John	22BCG10051	Art and Animation	User Interface Design