

FPS (Shooting Game)

Behind the Enemy lines

(Project Proposal)



Project Code

<Project code assigned by the Project Office>

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Table of Contents

1.	Abstract.....	3
2.	Background and Justification.....	3
3.	Project Methodology.....	4
4.	Project Scope.....	5
5.	High level Project Plan	5
6.	References.....	5

1. Abstract

Our game is designed to provide users with an immersive source of entertainment, offering challenges and relaxation for their leisure time. As players progress, they experience a sense of accomplishment by overcoming obstacles and earning rewards. It's an FPS survival and action game with the core objective of reaching the final location while battling enemies. In initial levels, players wield a single weapon (Gun) to eliminate enemies within their red zone, representing enemy visibility. If a player enters this zone, enemies give chase and attack, each player and enemy having defined lifespans. Fallen enemies drop coins that extend the player's life. We're streamlining development by using pre-built assets from the Unity Asset Store for environment, character, and object development. Our focus is on creating an intuitive and visually appealing user interface, including menus and in-game displays. Scripting will be done in C# using Visual Studio for effective event handling, and AI will be implemented to enable enemy movement and attacks within their designated range. The project's significance lies in delivering an enjoyable and challenging gaming experience, with various levels and difficulty modes to keep players engaged. The benefits encompass player satisfaction, potential monetization avenues, and a streamlined development process that maximizes efficiency and quality.

2. Background and Justification

Enhancing and continuing work in the FPS game genre is justified by the perpetual demand for innovative and captivating gaming experiences. A wide number of games are developing on shooting.

Inspirations from Previous Shooting Games:

- **Call of Duty: Modern Warfare (2019):** Realistic modern combat scenarios, gripping narrative, and cross-platform multiplayer.
- **Sniper 3D: Gun Shooting Games :** Fast-paced, intense combat, and creative demon-slaying mechanics.
- We also checked the working of the **Commando Strike game**, where we found that they have a good UI environment but lack impressive enemy performance. We plan to enhance enemy AI for better tracking and improved gameplay.

Target Audience: As games are popular among people of all age groups, our target audience primarily consists of teenagers aged 15-30, with a focus on providing an entertaining experience. We will prioritize creating the best UI design for the game project.

Graphics and Materials: High-resolution textures and materials will be utilized in the game to offer users a superior graphic experience.

Enemy Behavior: Enemies will attack the player's Commando within their attack and following distance. If the Commando goes out of the following distance, enemies will revert to random movement. This change in enemy behavior adds depth to the gameplay, making it more engaging.

AI Adaptation: Our main contribution to this project is implementing AI that adapts to the player's tactics and evolves over time. This feature creates a dynamic and challenging gameplay experience, compelling players to continually adjust their strategies.

3. Project Methodology

- Our game will be designed using **Blender** and it will be developed in **UNITY Engine**
- For Scripting **Visual studio** and **C#** language will be used.

We will try to create low poly characters that they will be feasible and supported to every system and device.

Project Planning and Initiation:

Make a project plan That Clearly state the project's objectives, including the game's core concept, target audience.

Determine the project's scope and any constraints such as budget, timeline, and technical limitations.

Develop a detailed project plan with milestones, deadlines, and resource allocation.

Design and Development:

Game Design: Create a comprehensive game design document (GDD) outlining gameplay mechanics, levels, characters, and story.

Coding and Implementation: Begin coding the game using the chosen development tools, implementing core gameplay features, AI, physics, and controls.

Asset Creation: Develop 2D/3D assets, textures, animations, and audio elements, ensuring they align with the game's design and visual style.

User Interface: Design and implement user interfaces for menus, HUD elements, and in-game displays.

Testing and Iteration: Continuously test the game, fixing bugs, addressing design issues, and incorporating player feedback to improve gameplay.

Quality Assurance and Optimization:

Polishing: Fine-tune gameplay, graphics, and sound settings for a smooth player experience.

Optimization: Optimize code and assets to ensure efficient resource usage and smooth performance on various platforms and devices.

Bug Fixes and Finalization: In this step we will Test our project and fix the bugs and errors found.

Team Composition: Our team consists of two members, with one working on the UI design and sound settings, and the other focusing on scripting and mutual development. This collaborative approach will help us deliver a well-rounded project.

4. Project Scope

Video games are not just for user benefits but their main purpose is user entertainment. So we must focus on user desired aspects. Only developing the game cannot make it entertaining. We must consider all challenging situations by development process. We also have to invest a proper time on designing again for improved visualizing aspects we will try to optimize our game as much as possible by using **low poly BPR game characters and low poly environment so it can be smoothly played on more devices.** Game does not create profile for its user. It does not need to access user credentials therefore security is not a concern in this application.

5. High level Project Plan

Concept and design Phase: 2 weeks
Development of environment: 3 weeks
AI agents and their handling: 2 weeks
Assets designing and creation: 2 Weeks
Sounds: 2 weeks
UI development: 3 weeks
Testing and Bug fixes: 2 weeks
Finalization: 2 weeks

The timeframes provided for each activity are approximate and may vary depending on project complexity

6. References

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