

ABSTRACT

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IMPLEMENTASI ARTIFICIAL INTELLIGENCE PADA NON-PLAYABLE CHARACTER UNTUK MODIFIKASI GAME FIRST PERSON SHOOTER SINGLE PLAYER

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(xvii + 109 + Lampiran)

This study aims to modify a single-player First Person Shooter (FPS) action game with the implementation of Artificial Intelligence (AI) on Non-Playable Characters (NPCs) using Unity. A major issue faced in conventional multiplayer FPS games is the reliance on internet connectivity and the lack of challenges that match the player's skills. Therefore, this research focuses on developing a single-player game with AI capable of providing a more dynamic, challenging, and adaptive gameplay experience. The game is expected to address the shortcomings of multiplayer games, such as dependence on internet connections and negative player behaviors like cheating. The research method used is the Software Development Life Cycle (SDLC), which includes planning, requirements analysis, sketch design, implementation, and testing. The game is set in a former nuclear power plant with a survival theme, where players must fend off continuous waves of enemies spawned dynamically. AI-controlled enemies possess tactical abilities, adjusting their strategies based on player interactions, creating a tense and varied gameplay experience each time. The results show that the game runs well without requiring an internet connection, and the implemented AI provides adaptive challenges according to the player's abilities. Testing was conducted on various desktop devices with different specifications. Although some devices experienced frame rate drops during large enemy spawns, overall, the game delivers a satisfying gaming experience.

Bibliography (2017 - 2024)