

**HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY**

# **GRADUATION THESIS**

**Red Planet: A Multiplayer First-person shooter game**

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# PLEDGE

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# ABSTRACT

FPS hero-based games combine first-person shooting mechanics with character-based gameplay, where players choose from a roster of unique heroes, each with special abilities and weapons. Renowned titles like Overwatch, Apex Legends, and Valorant exemplify this genre with their thrilling gameplay and stunning graphics.

In Vietnam, these games are particularly popular among the younger generation. Despite this enthusiasm, no FPS hero-based games have been developed by Vietnamese developers. Most of the acclaimed titles in this genre come from foreign developers. Local developers have introduced several real-time multiplayer FPS games, but many have struggled to achieve success due to shortcomings in visual quality, gameplay, and user experience.

My project aims to change this by creating an engaging and enjoyable FPS hero-based game. This game will ensure players feel their time is well spent through fun and interactive multiplayer gameplay. It will allow players to connect with friends, meet new people, and promote social interaction. Additionally, the game will help players improve their gaming skills through intense gunfighting matches.

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## LIST OF ABBREVIATIONS

Abbreviation	Full Expression
AI	Artificial Intelligence
FPS	First Person Shooter
HUB	Heads-Up Display
MOBA	Multiplayer Online Battle Arena
RPC	Remote Procedure Calls
sci-fi	Science Fiction
UI	User Interface
URP	Universal Render Pipeline