Bahria University, Islamabad
Department of Software Engineering

Object Oriented Programming
Lab (Fall-2024)
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Comments:
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LAB

Space Shooter Game Proposal

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Space Shooter Game Proposal

1. Introduction

Space Shooter is an exhilarating arcade-style game where players pilot a spaceship through hostile environments, destroying obstacles and shooting down enemy ships to score points and complete levels.

2. Game Overview

The game involves navigating through space while fending off waves of enemies and avoiding asteroids. The player earns points by destroying enemies and completing missions. The challenge increases as the player progresses.

3. Features and Functionalities

Core Features:

Health: Health points will be displayed to check player health

Shooting: Player spaceship will fire bullets to destroy enemies

Difficult: Game difficult level will auto increase as Player complete beginning levels

Movement: Smooth controls for navigating through space.

Powerup: As player destroy enemies then after some time Powerups will be thrown to increase health

Score: Score will be counted as player destroy enemies

Pause/Resume: Player can pause game loop at any time

Restart: Player can restart game at any time

Quit: Player can quit game at any time

4. Development Approach

The game will follow object-oriented principles:

Encapsulation: Separate classes for spaceship , enemy behavior, and scoring.

Inheritance: Base classes for Spaceship and derived types for PlayerShip and EnemyShip.

Polymorphism: Implement multiple enemy behaviors (e.g., static turrets, moving drones).

5. Tools and Technologies

Programming Language: C++
Graphics Library: SFML
IDE: Visual Studio 2022
Version Control: Git & GitHub
Git Hub link: https://github.com/junejosamad/SpaceShooter

6. Conclusion

Space Shooter Game demonstrates advanced object-oriented programming principles while providing an engaging gaming experience. It serves as a challenging and creative project for the OOP course

The End