



UNIVERSITÀ
degli STUDI
di CATANIA

Department of Electrical, Electronic and Computer Engineering

MASTER'S DEGREE COURSE IN COMPUTER ENGINEERING

Secret Invasion

Digital Game Development Course

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1. Introduction

Secret Invasion is a 2D video game developed with Unity by Twenty Reals Games. The game offers two main game modes, "Story" and "Survival", each with its own unique features and different customization options for the gameplay experience.

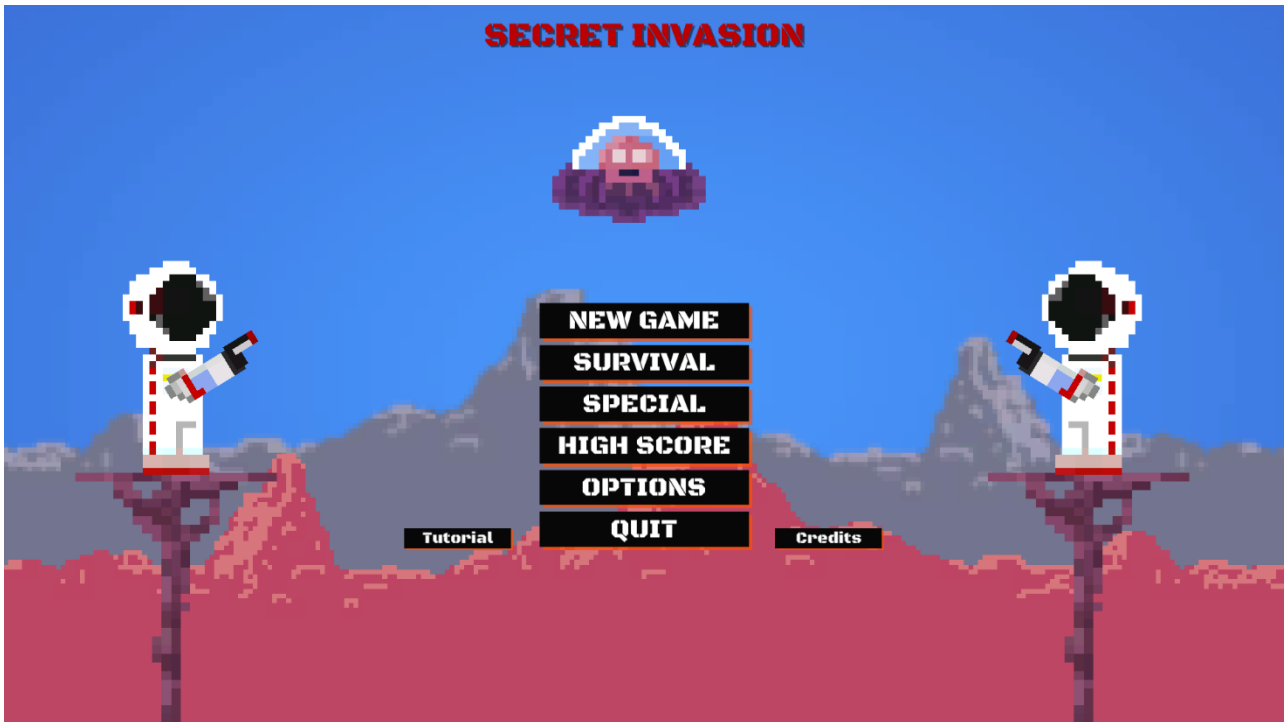


Figure 1.1 Home Screen

2. Game modes

The game features two different game modes, a level-based campaign and a wave-based survival mode.

2.1. Story Mode

The "Story" mode is a small adventure that offers a series of levels with varying difficulty.

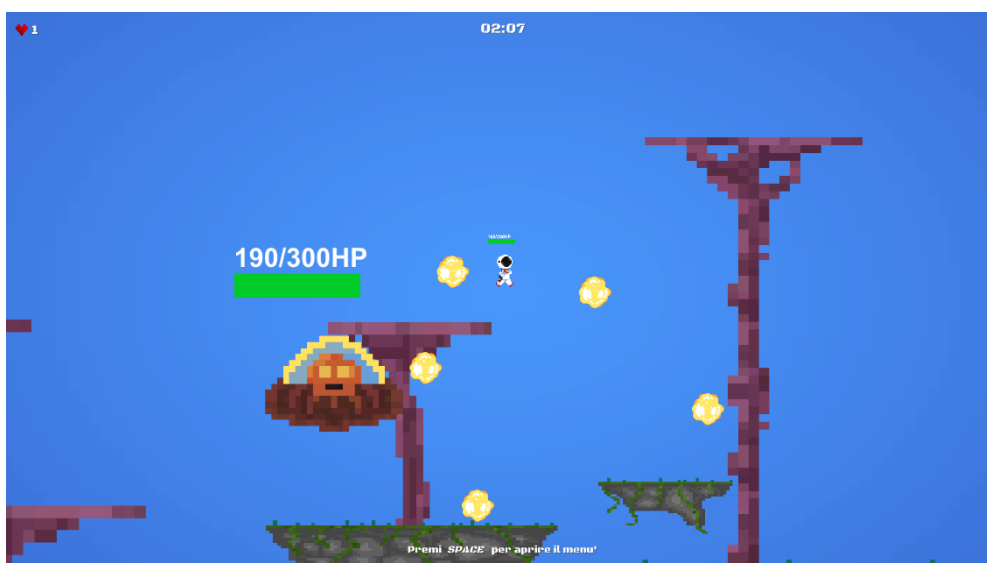
Players can choose from four difficulty levels:

- **Easy:** Ideal for beginners or those who want to enjoy the storyline without too many challenges.
- **Normal:** A balance between challenge and playability, suitable for most players.
- **Hard:** High difficulty level, designed for experienced players looking for a significant challenge.
- **Ultimate:** The highest difficulty, recommended only for the most experienced and brave players. Here, the enemies are stronger and the levels more complex.

Each difficulty level affects the power and endurance of the enemies.

Below are some screenshots of this mode:

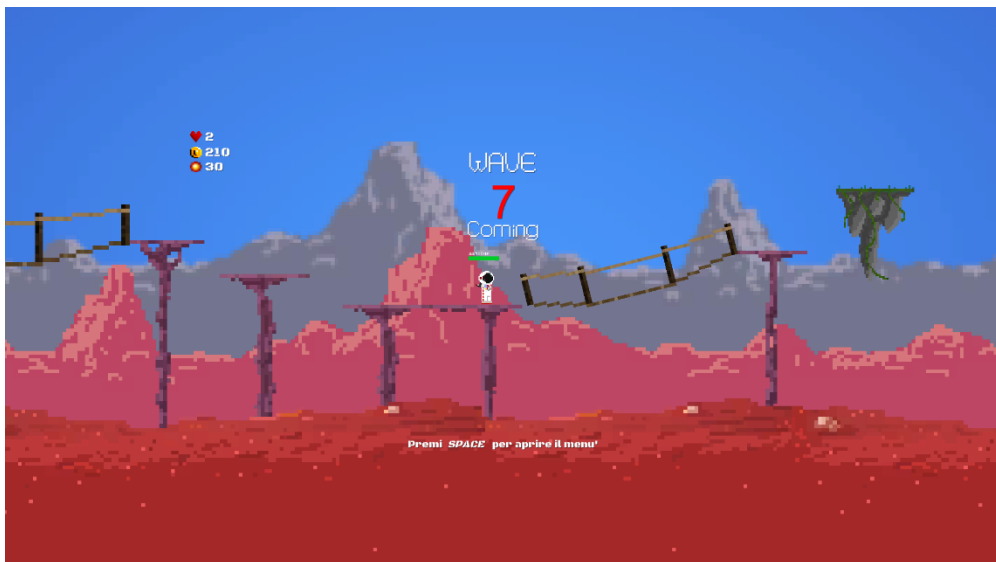
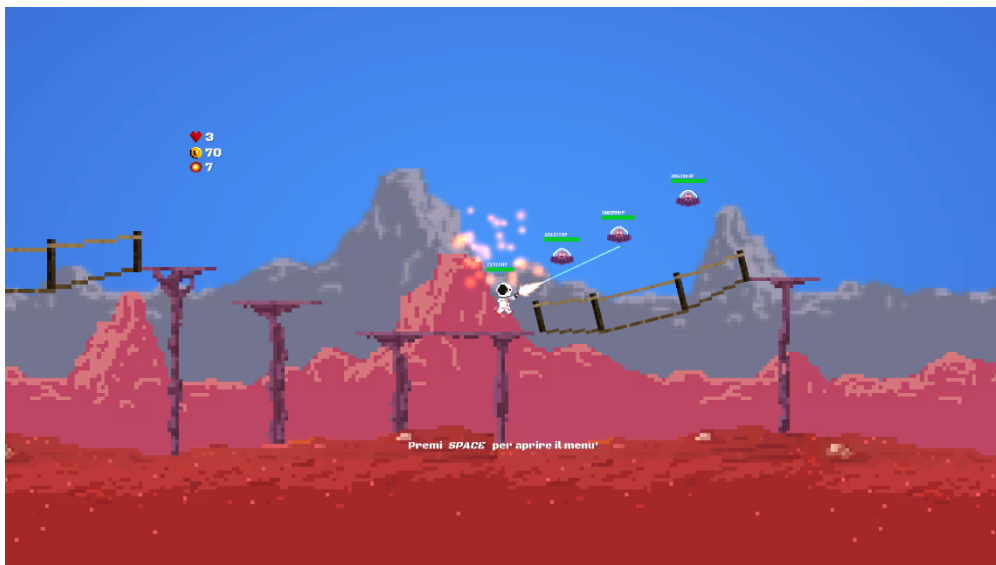




2.2. Survival Mode

The "Survival" mode tests the player's skill in a context of enemy waves with increasing difficulty. The goal is to hold out for as long as possible as the waves become progressively more challenging, with increasingly powerful and numerous enemies, and a playing field that becomes increasingly hostile. The player has three lives to face these challenges, and each enemy pierced allows them to earn 10 coins, which can be used to upgrade the character.

Here are some screenshots:



2.2.1. Shop

Within the "Survival" mode, there is a shop where the player can use the accumulated coins to upgrade their character.

Upgrade options include:

- **Health:** Increases the amount of the character's maximum health, allowing them to take more damage.
- **Speed:** Increases the character's movement speed, useful for avoiding enemy attacks.
- **Power:** Increases the strength of attacks, allowing you to eliminate enemies more quickly.

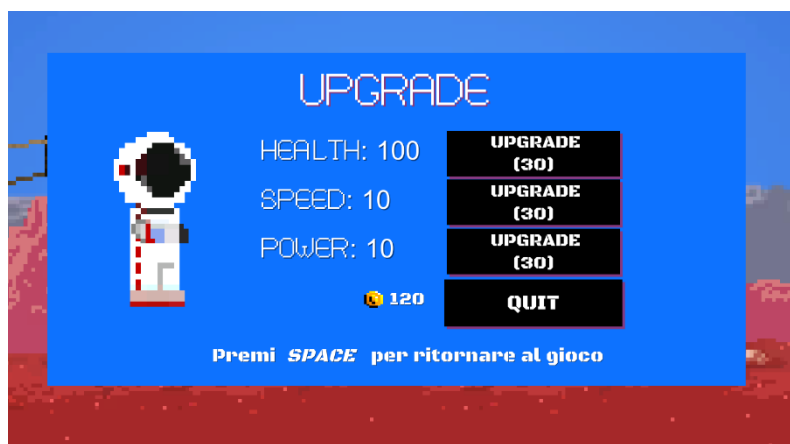


Figura 2.1 Shop

2.2.2. Ranking

Each game session in "Survival" mode generates a score based on the number of enemies defeated. This score is recorded in a leaderboard that allows you to compare your results with those of other players, stimulating competition.

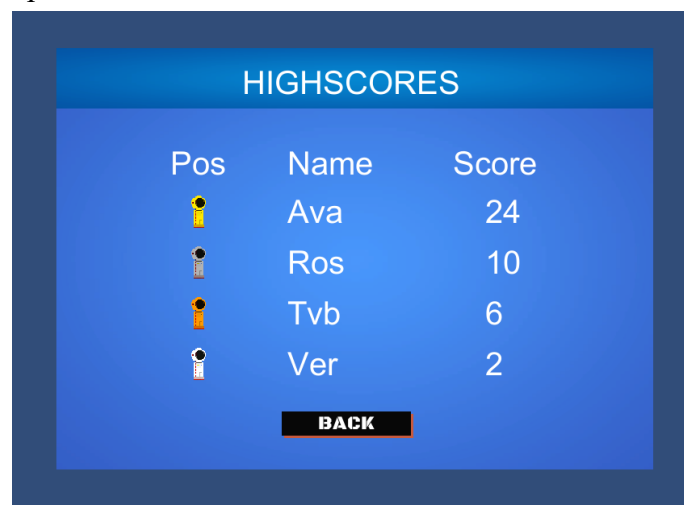


Figura 2.2 Highscores

3. Graphics and Control Settings

3.1. Graphics Settings

The game supports three different graphics resolutions, ensuring compatibility with a wide range of devices and player preferences:

- **960x540:** Resolution suitable for devices with smaller screens or systems with more limited performance.
- **1280x720:** Standard HD resolution, ideal balance between visual quality and performance.
- **1920x1080:** Full HD resolution for superior graphics quality, suitable for larger screens and systems with more computing power.

The user interface and graphics have been designed to dynamically adapt to each of the supported resolutions, ensuring an optimal gaming experience regardless of the configuration chosen.

3.2. Game Controls

The game offers the possibility to choose between two control schemes for the movement of the character, allowing players to use the system that suits them best:

- **WASD:** Classic control used in many PC games, where W allows you to jump, A to move left, and D to move right.
- **D-pads:** A traditional alternative that uses the arrow keys on your keyboard to move your character in the four directions.

Both control options are fully supported and can be selected from the game settings, allowing players to customize their experience to suit their preferences.