DOCUMENTATION OF THE GAME

CYBER NINJA

Team information

- Team Members:

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- School: Ankuram Academy

- Event: SOFTEK 2024, COFAS  
- Team Code : C-06

- Category: Senior

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Game Overview

Game Title: Cyber Ninja

Theme: Information Technology

Topic: Retro Gaming

**Objective:**

Cyber Ninja is a retro-style game where players control a powerful robot attached(castle), representing an antivirus or defender system, tasked with defending a digital fortress against various cyber threats like viruses, malware, and hackers. The goal is to protect the fortress by shooting down enemies, upgrading defenses, and progressing through increasingly difficult levels.

**Game Features**

1. Gameplay Mechanics

- Aiming and Shooting: Players use a crosshair to aim at incoming enemies and shoot by clicking the mouse. The objective is to eliminate all threats before they breach the castle.

- Enemies: The enemies consist/depicts of viruses, malware, and hackers, each with unique behaviors and attack patterns.

2. Upgrade System:

Power-Ups: Players can spend points earned from defeating enemies (virus) on various upgrades:

- Health Regain Button

- Health Increase Beyond Normal

- Tower Upgrade Button

3. Levels:

- The game features multiple levels with increasing difficulty. As the player progresses, more enemies appear, and the challenges become tougher, requiring strategic use of upgrades.

4. Sound Effects:

- Engaging sound effects provide immediate feedback for actions like shooting and destroying enemies, enhancing the overall gameplay experience.

5. Retro-Style Graphics:

- The game uses pixel art to evoke nostalgia while keeping the focus on the theme of cybersecurity.

**Cybersecurity Concept**

-The central theme of Cyber Ninja revolves around modern cybersecurity. The robot ninja is designed to represent an antivirus or defender system, tasked with protecting the digital fortress from cyber threats. Enemies such as viruses, malware, and hackers reflect the real-world threats faced in the field of Information Technology.

The game not only provides entertainment but also subtly educates players on the importance of cybersecurity by depicting the constant battle between defenders (antivirus) and attackers (cyber threats).

**Development Tools**

- Software Used: VS Code , Git and GitHub  
(https://github.com/rajan-poudel)

- Programming Language: Python

- Library Used: PyGame

- Graphic Design Tools: Photoshop

**Technical Implementation**

1. Game Architecture:

- The game is built using PyGame library of python, and the codebase is structured to handle multiple levels, enemy behaviors, and real-time player interactions.

2. Enemies:

- The enemy is designed to exhibit different damages based on their type (e.g.,damages according to levels) which attacks the digital fortress.

3. Upgrade System:

- The upgrade system allows players to improve their defenses(i.e digital fortress here) through a simple point-based system, encouraging strategic decision-making.

4. Crosshair and Shooting Mechanism:

- The crosshair follows the mouse movement, allowing for precise targeting. Shooting is initiated with a click, and enemies are destroyed when hit.

**Conclusion**

- Cyber Ninja is a creative fusion of retro gaming and modern information technology. By depicting a digital defender fighting off cyber threats, the game captures the essence of cybersecurity while offering a fun and engaging experience for players. We hope this game serves as both entertainment and a reminder of the digital challenges faced in today’s interconnected world.

**Submission Details**

- Included Files:

- Game Executable Folder(The files itself doesn’t runs at it’s once, we need it’s assests by it’s side. So, kindly run the executable file from the only Game Executable Folder ).

- Source Code

- Documentation