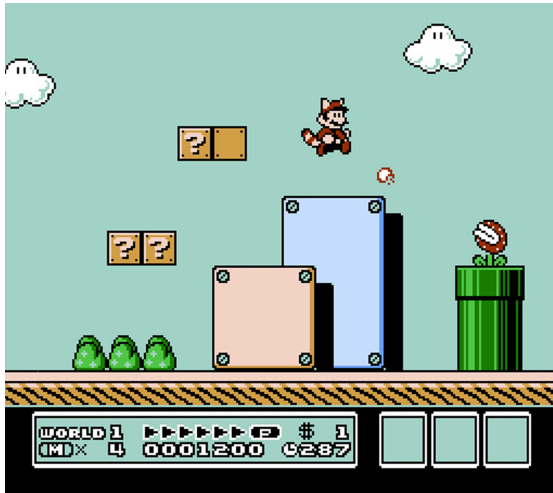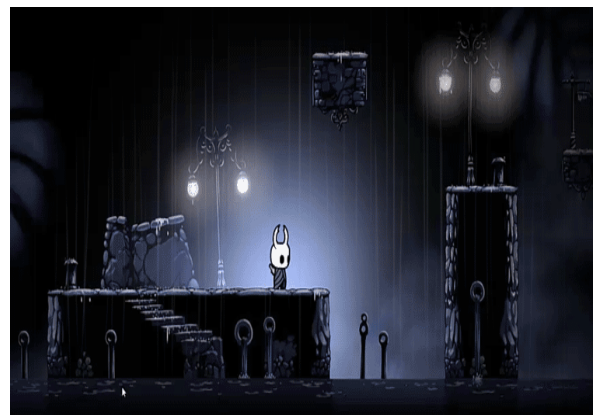# Pixel Jumper

2D Platformer Parkour Game
CMPS 3350

Aldrin Amistoso | Adam Ilarde | Udai Singh | Daniel Lopez | Nicklas Chiang

Super Mario Brothers (NES)   **Hollow Knight**

Overview:

Lost in a pixelated world filled with intriguing landscapes and challenging terrains, our unnamed hero must navigate through perplexing obstacles using nothing but agility and wits. Every step in this mysterious land feels like a puzzle, and the art of parkour is the key to solving it. In this game, players control a character, traveling through a dynamic level that constantly challenges them with unique and evolving parkour mechanics.

The essence of the game is the blend of quick reflexes and strategic planning. The heart system, combined with time-based scoring, pushes players not just to survive but to do so efficiently. Coins sprinkled throughout levels serve as both a guide and a reward. With its retro visuals, immersive soundscapes, and addictive gameplay mechanics, "Pixel Parkour Runner" promises to be an adrenaline-pumping experience, paying homage to classic games while introducing fresh, modern challenges.

Technical Requirements:
➢ Programming in: C++
➢ Framework: Gordon's framework (walk2).
➢ Graphics with: OpenGL
➢ Inputs:

- Keyboard: Movement with A(left), D(right), W(jump), S(down), shift(dash)
- Mouse: Use to start and end game

Product Features:
➢ Art:

- 2-Dimensional
- Sound effects and background music

➢ Physics:

- Collision detection with obstacles and enemies
- Parkour-based physics
  - Example: Double Jump, Dash, etc.

➢ System:

- Time display for time taken to finish a level
- Loss of a heart when hitting an obstacle
- Instant death pits (lava, bottomless pits)
- Start menu

Overall Goals:
➢ Gradual level difficulty progression
➢ Coin collection (for points and possible extra lives)
➢ Implement power-ups (like Super Star for invincibility)
➢ Introduce complex parkour challenges
➢ Improve game visual and sound quality over development iterations

Possible Additional Features:
➢ Leaderboard System
➢ Additional Levels
➢ Additional Power-ups
➢ AI Enemies
➢ Interactive Environments