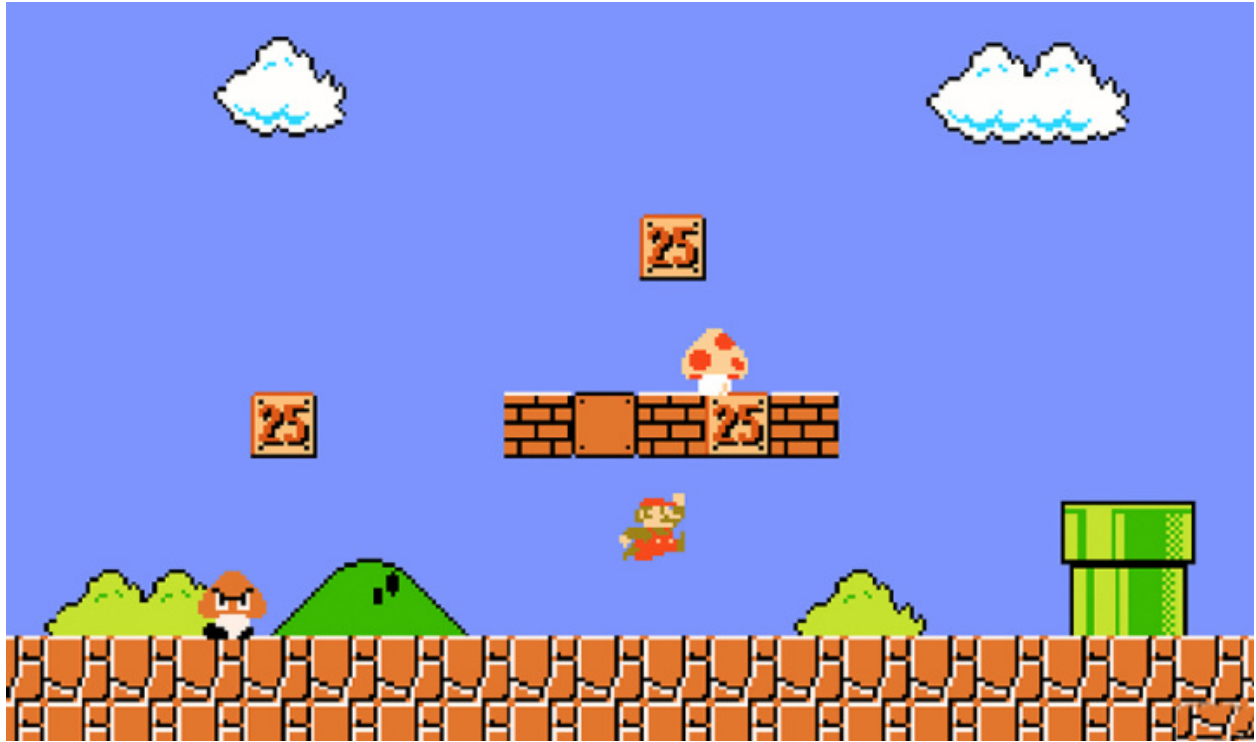# Super Mario Proposal

Groupe members: Hangpu Cao (hc3346), Zeqi Li (zl3202), Shen Gao (sg4140), Han Yang (hy2759), Zhiyuan Liu (zl3208)

Overview

Our project goal is to construct a Mario-like 2D side-scroller game. We aim to attempt the reconstruction of core game features including 2D map scrolling, item acquisitions, and enemy interactions with the means of a collision detection algorithm.

Design Outline

- 2D Side-scrolling
  - The character should stay in the center of the screen while scrolling
- Hit Box Detection
  - The character should be blocked by the ground & walls. Enemies and coins should have the proper interaction when hitting the character.

- Audio Output
  - The game should have BGM and audio effects (jump, enemy killed, coins)
- Animation
  - Add score animation, death animation, kill animation, and impact animation. Complete the character's interaction with terrain and enemies.

I/O Device

Video Output: VGA
Audio Output: 3.5mm audio jack
Controller Input: Keyboard

Milestones

1. Implement of the use of keyboard control Mario's movement, including jumping and moving forward and backward.
2. Map design & 2D map scrolling.
3. Animation & Audio; Test and debug the game.