CGRA151 Project Report

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Name of game/artwork: Unicorn Escape

Vision
A game sprite, the unicorn, is jumping on top of platforms the rising acid below. The game play will be similar to that of Doodle Jump. The main differences are that the unicorn isn't trying to attack enemies but instead is avoiding touching the acid that is slowly rising behind them.As the player progresses in the game, the platforms get smaller and the acid rises faster.

Achievement
I was able to make the sprite be able to jump on top of and stay on the platforms and have acid rise behind him. When the unicorn touches the acid, the game cuts to a game over screen. I was also able to make the menus for the game.

Technical Challenges
My main challenge, despite sounding so simple, was trying to get the unicorn to stay on top the platform. This was surprisingly hard because along with gravity affecting its downward velocity, the unicorn often kept glitching through the platform and often getting stuck in it. I resolved this issue by having a "sitting" state where if its on a platform, the unicorn's position gets set to be on top of the platform and its velocity gets set to zero and gravity is set to zero. The other challenge was trying to get the unicorn to stay on a platform when it position changes as a result of the unicorn moving upward. I resolved this by saving a platform block that the unicorn was on into its object everytime the platforms are drawn.

Reflection
If I'll be honest, making this was rather frustrating (though that might be because I started working on this quite late). The thing that took me the longest to implement was trying to get the unicorn to stay on a platform. Despite being so easy in theory, the issue often was that the sprite kept glitching through its boundary because gravity kept trying to increment velocity, which in turn kept tying to move the sprite's position. That and combined with trying to make the every single element move downward as the sprite jumped. What I found surpringly easy was implementing gravity on a falling object. The game was going to have falling objects however due to time constraints as of writing this, I was unable to implement this. All in all, I am quite proud of this game, especially with how much work I had to put into this.