mGforce

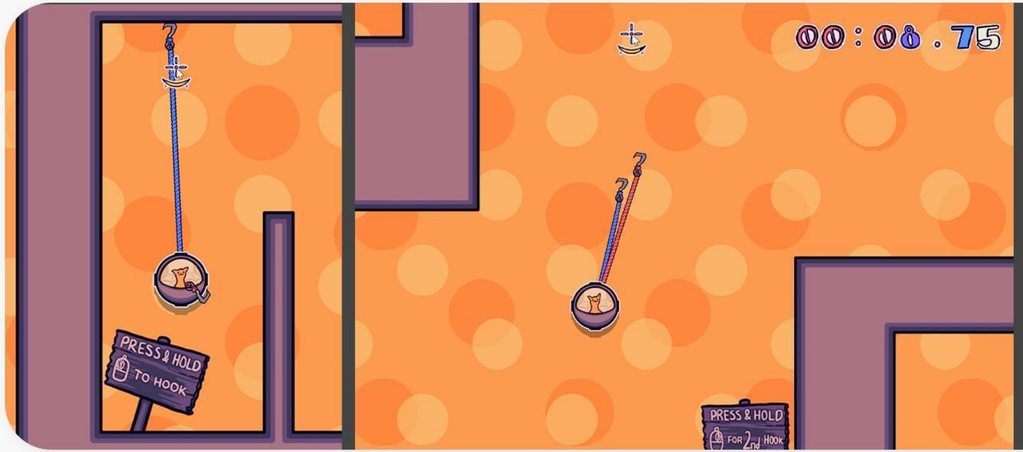
INTRODUCTION: mGforce is a 2D speedrun game where the player, a circular UFO, attaches on walls using cables and swings to a portal.
ENGINE USED: Gamemaker Studio 2
PLATFORM: HTML but a mouse required

The game was created as a final project for game development in the summer high school program at NYU Tisch in 2025. The students were divided into pairs and every pair was assigned verbs, one of which should be the theme of our game. We received the verb “hang”

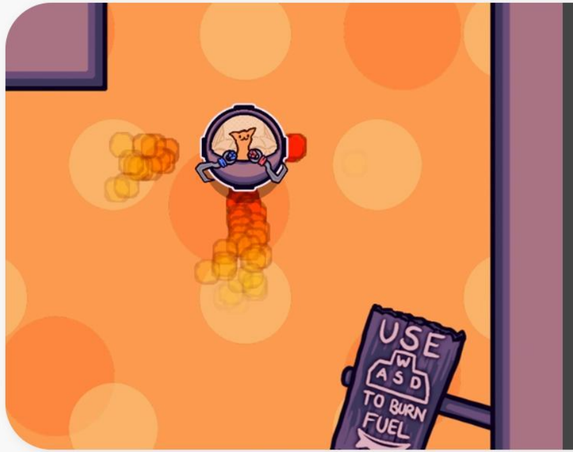
With “hang”, it’s likely about hanging on a ceiling, in the middle of the air. We came up with games like Cut the Rope that might represent the situation. While hanging, it’s also possible to swing around. That’s how we came to creating a game where players swing in fixed areas to get to the destination.

MEMBERS: Haoran L. and Arthur K.
PROJECT DURATION: 12 days
MY JOB IN THE PROJECT: game ideas; level design; programming of minor mechanics; testing

CONTROLS / GAME MECHANICS

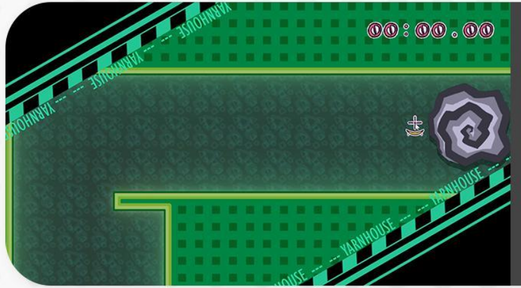


Each mouse button is used to control one cable&hook – when pressed, the hook will extend towards the mouse pointer and attach to the wall it meets, this provides an acceleration to the direction.



WASD can be used to slightly move the character – it burns fuel and can not be used when fuel used up.

Press R to restart
Hold ESC to quit to the menu



Before starting, hold Shift to take a look of what the level is like.

UI

START MENU

CURSOR:
It contains a cross and an arc. The cross represents the direction of cable extending to and the arc indicates the amount of fuel remaining (yellow part).

LEVEL START – click and it will begin

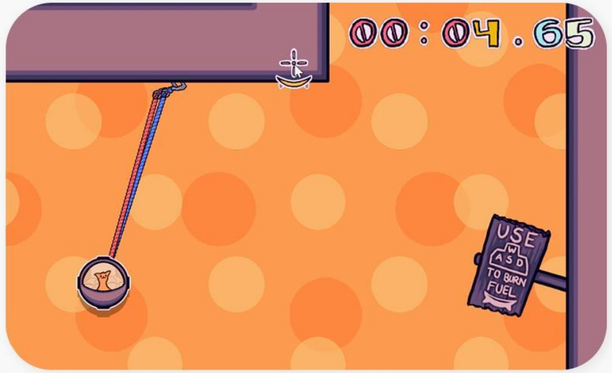
LEVEL SELECTION MENU

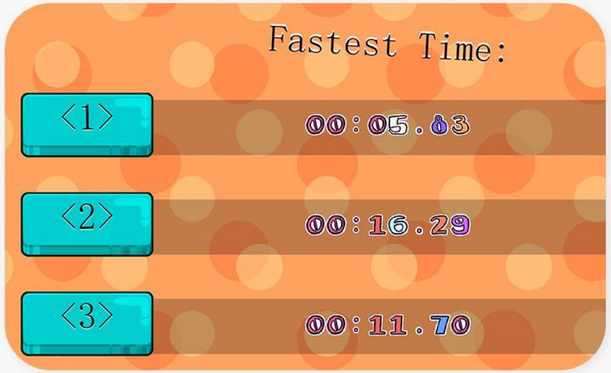
LEVEL COMPLETE – contains final time, exit button and redo button

GAME IDEAS — SPEEDRUN

When the basic movement mechanics was developed (by my partner for most) it appeared that it was challenging; but I thought if the players were only required to get to the destination (a portal) it would mean that the player might finish the game within two minutes and that's all. We have to give the players some tension that they have to complete the same level several times and improving as they repeat. Thus we made it a speedrun game: the fact that there's a timer intensifies the difficulty. (For encouraging players to compete, we posted our best scores during the final showcase and prepared treats for anyone who beats them; but no one succeeded though).

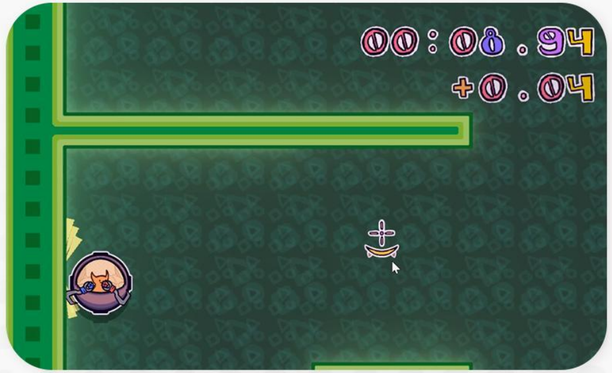
I programmed the timers and "best scores" in the menu.

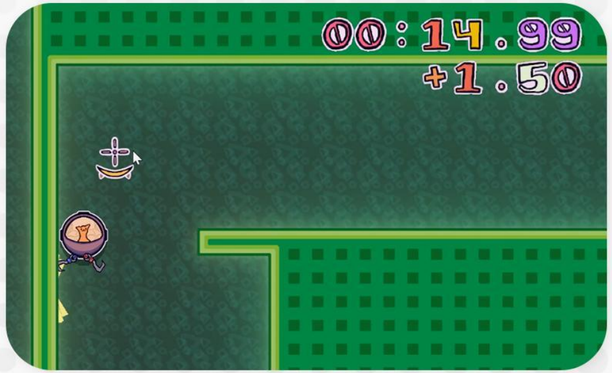




GAME IDEAS - BUMPING

The theme of this game is "hang", so we shouldn't be expecting players to stay in touch with walls. After proposing the speedrun design I suggested that we could add time to the timer whenever the player bumps into a wall/ceiling/ground. In this way the player would have to avoid them and mind their precise actions: if they want to get to the portal faster by aggressively bumping around in the level, they would instead get punished by having lower scores (I mean, longer time), even though they may reach the portal faster. This increases the amount of practice needed for competing.

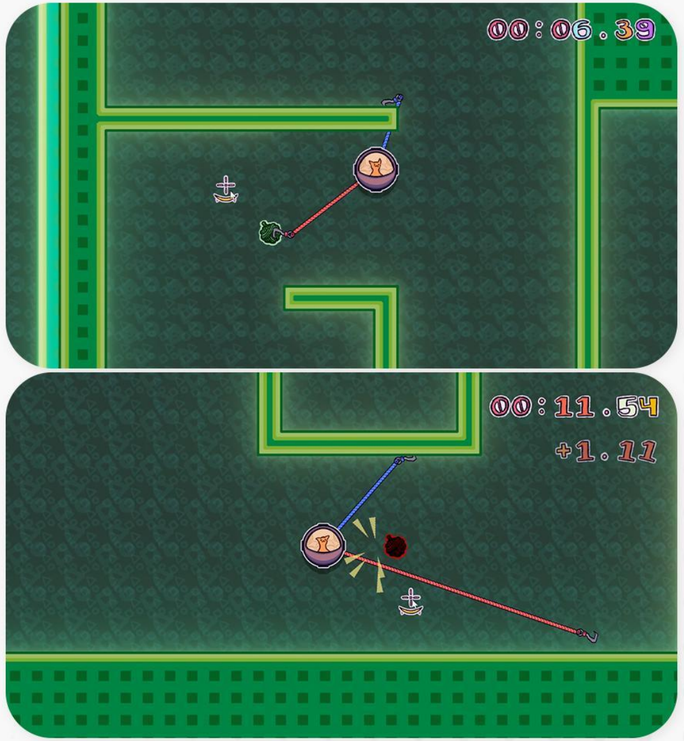




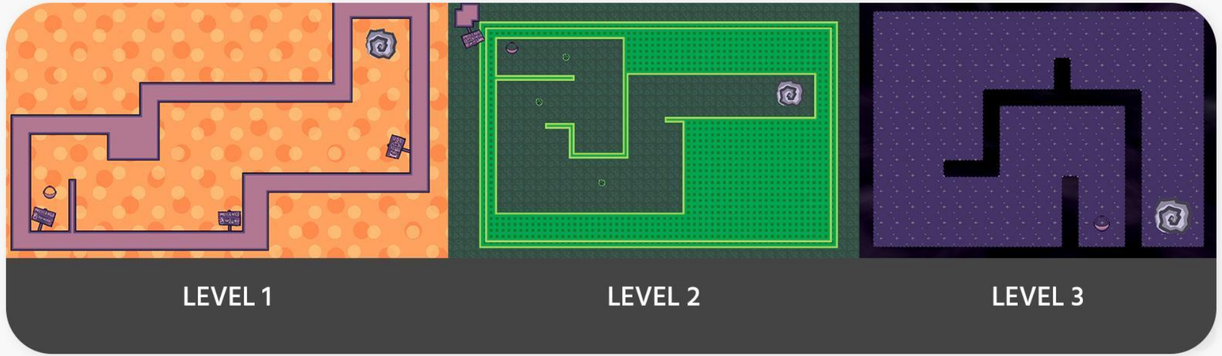
Bumping with higher velocity results in more time added

GAME IDEAS - ENEMIES

We made two cables for hanging and swinging around; but it turned out that using two cables at the same time would result in really aggressive acceleration, the player would definitely bump into the walls. But we didn't want to remove one of them, so I proposed adding obstacles – "enemies" I would call them (in the shape of yarns) but they don't do anything but being stationary and blocking the player's route to the portal (of course, bumping into them adds time). To pass through them, the player would have to hang using one cable and catch the enemy using the other, and it would pull the enemy to somewhere else. Again, more precision would be needed for players' actions.



LEVEL DESIGN



REACTIONS

Our game was seemingly the best, regarding completion and interest catching, among the 8 projects in the final showcase.

Comments from the teacher (in short): - Diego Garcia, associate instructor at NYU game center
He finds the game really engaging, impressed that we were able to implement saved high scores (my work). He took his own time to improve his scores while writing his comments (which was our aim for sure). We earned 25/25 from him for the final score.