

REPORT_GROUP 16

CS427: 3D Visualization and Game Development

Mini project : 2D Games

19125111 - Tran Minh Nhut

19125118 - Nguyen Hoang Son

19125115 - Dinh Duy Phuoc

19125121 - Nguyen Duc Thang

Report: Contains the report file about the game, and application (presents your ideas, features, techniques, resources reference, ...)

1. Idea:

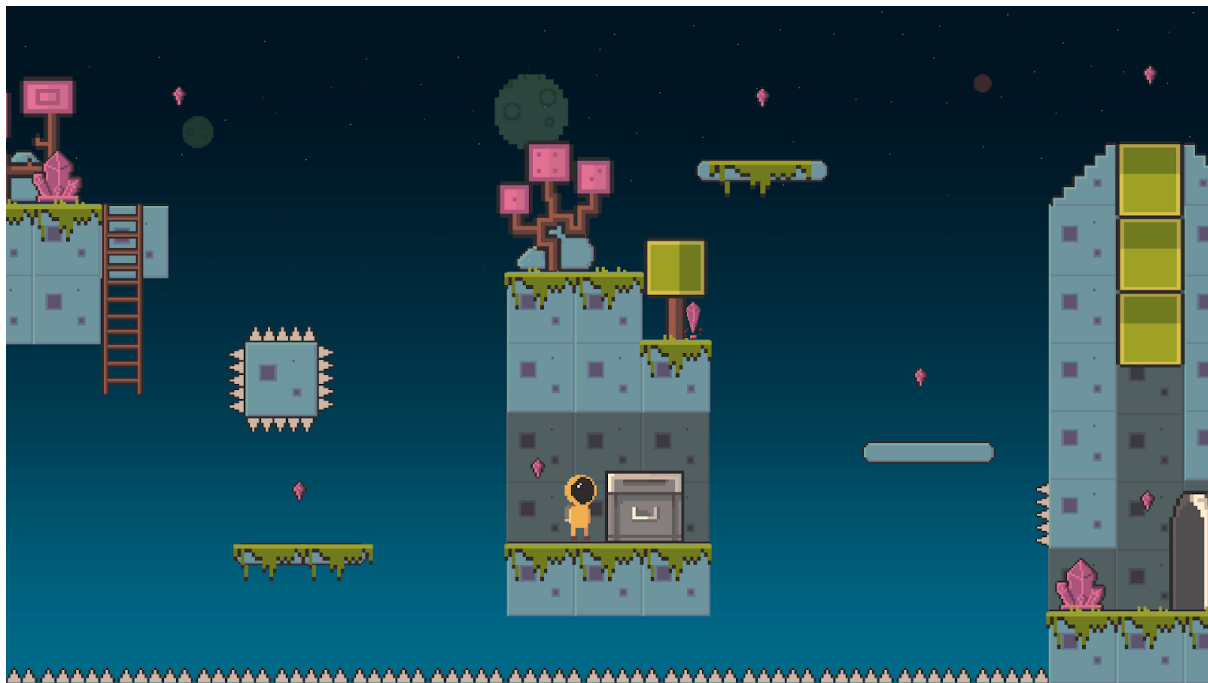
This game is about an adventurer who has a great passion for traveling and exploring different places in the mass universe. He always wants to set foot in strange planets which have never been discovered by anyone. After each adventure, he writes about his experiences: what he has passed, who he met and what he has learned. But this time, on his current adventure to a strange and deserted planet, he has to face real trouble. The adventurer got lost and this planet is covered with traps and he cannot find any help. Your mission is to help the adventurer overcome dangerous obstacles on his way back to the spaceship in order to survive and continue writing his adventures.

2. Feature:

- Genre: Adventure game.
- Theme: Sci-fi.
- Platform: PC.
- Input system: Keyboard.
- Two levels from easy to hard.



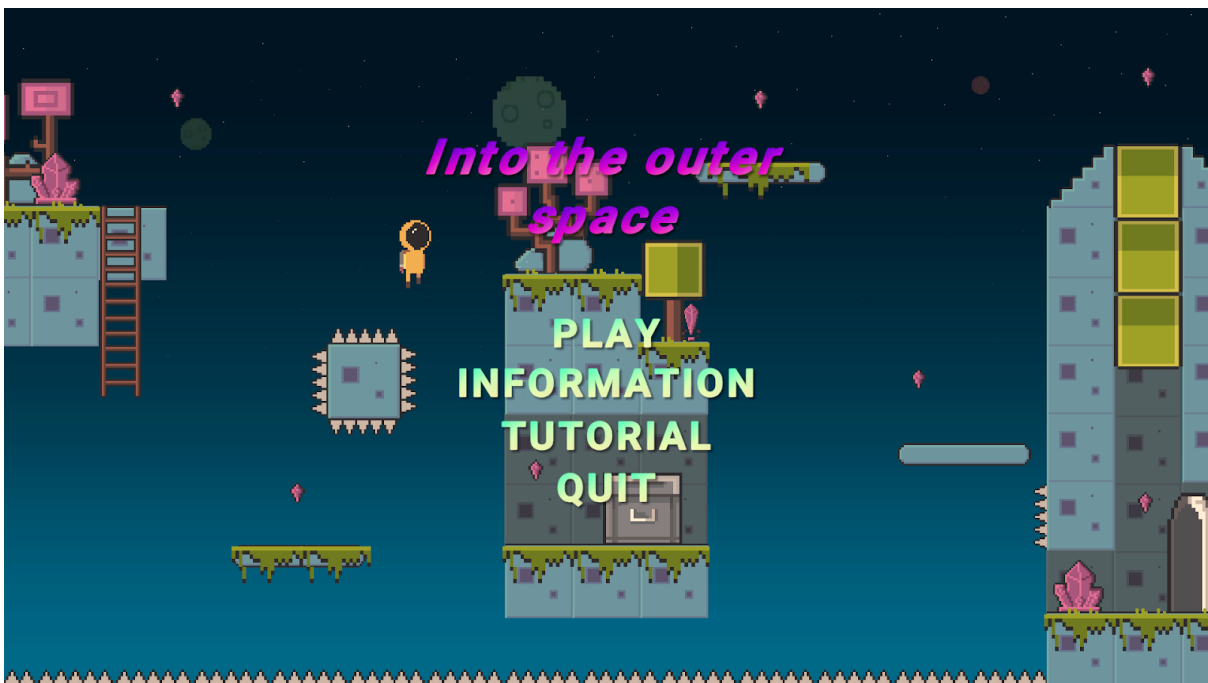
+ Level 1:



+ Level 2:



- Can easily play/pause the game while playing.



- Moving and standing barricades.
- Besides, we can interact with the lever to open the gate.
- Interactive menu:



- + Start game.
- + Quit game.
- + Tutorial section.
- + Team information section.
- The effect sounds when a character falls and collides with barricades.
- Background music during the game.
- Animation when a character jumps, walks and runs.
- Character status: live or die. If we die, we can easily respawn many times but just respawn at the point we have started.
- Build application into .exe file to run on Windows and .app file to run on Mac.

3. Techniques:

- Using animation with sprites changing over time and animation transforming over time.
- Using Grid and Tile Palette to create maps easier and faster.
Sometimes changing the scale and location of sprites in order to integrate the maps is quite hard and takes too much time.
 - + With Grid, we can easily separate parts for design such as Ground, HiddenGround, DamageZone, Stone, Trees, and Grass.

- This is a game platform with 2 levels and the astronaut just overcomes obstacles and gets into the portal. All the things are just on a screen so we use the fixed camera.
- Use color gradient file so that can easily change the color of the buttons and text in the menu.
- In this game, we almost use TextMesh Pro to make the menu more attractive.
- Tilemap Collider 2D and Composite Collider 2D are components that using to enclose and delimit the area of the sprites.
- Here we have written some scripts to revive the character as well as add sound to each of his actions. And more than that, you can pause anywhere at any time.

4. Resource reference:

- [Create a basic menu in Unity](#)
- [Free Pixel Space Platform Pack](#)

5. Poster:

- + **Page 1:** brief storyline and some gameplay review.



INTO THE OUTER SPACE

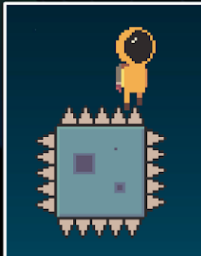
You are the only **astronaut** who survives in the Apollo-431 project.

The way to your spaceship is separated by distorted dimensions between **portals**,
fully covered with **mazes** and **traps**.

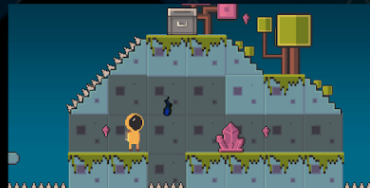
The only way to get out of is place is to:

Pass all grinding obstacles,
and
Approach the portals to escape.

You do not have many opportunities to turn your head back...



Avoid those deadly traps



Solve puzzles...



...and reach the portals

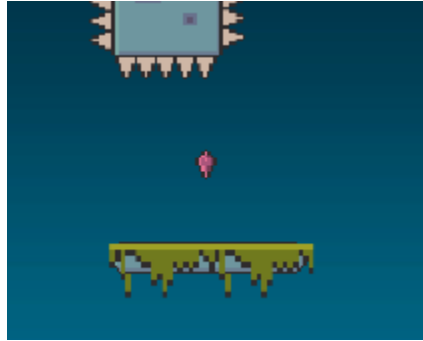
+ Page 2: Main poster.



6. Bug:

- Still some bugs such as:

- + We can not jump when we stand on a ladder or on the ground which of Grid of a ladder ground.
- + Sometimes after building and running the game will crash when we jump. This bug will appear at screen 1 when you stand on this object.



- + Solution to fix this: Just wait a little bit and you can play and not crash anymore.