

Game Design Document

Course: Computer Games Development

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1. Project description

First of all, my initial idea was to create a game like Mario Bros but based on the soccer world. Effectively, because I'm crazy about soccer, particularly during this period of the EURO 2021, I was interested in creating a game around this. However, I understood quickly the difficulty of finding all the elements of a soccer game like decorations, enemies, sounds, etc.

That's why I kept the idea of the Mario Bros game, but now with a wider choice of environment. So, the name of my game is **"THE UFO GAME 2D"**.

I choose this name, first because it's based a 2D Game, and "THE UFO" because of my main character.

2. Characters

Main Character:



I choose this character as the main Player of my game, he looks like a UFO, that's why I take him. His little story is that he just came back into a world and he has to leave it. The third level with the final boss is the last place he has to run away.



He has different values: health, invincibility duration, move speed, climb speed, jump force and a time between shots. Effectively, he can shoot Shuriken into enemies. All of these values can change depending on the difficulty chosen by the user.

Enemies:

First level:

Hazelnut:



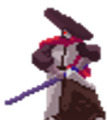
- He can only put damage on the player when touched, he doesn't move.
He can be killed by being jumped on his head by the player, and by Shuriken.

Snake:



- He can only put damage on the player when touched, he can move from the left to the right.
He can be killed by being jumped on his head by the player, and by Shuriken.

Martial enemy:



- He can only put damage on the player when touched, he has an animation with a sword.
He can be killed by Shuriken.

Second level:



Static soldier:

- He can shoot the player thanks to bullet. He is static because he is a sniper. He can be killed by Shuriken.



Dynamic soldier:

- He can shoot the player thanks to a bullet. He is dynamic, he is walking. He can be killed by Shuriken.



Plane:

- He is planning in the air, from the left to the right. He can shoot the player by throwing bullet from the air to the ground. He can be killed by Shuriken.

Third level (final one):



Skeleton:

- He can move from the left to the right, he can attack the player with an animation. He can be killed by Shuriken



Bat:

- He can move in the air, and when put damage to the player when touched. He can be killed by Shuriken.



Boss:

- He can move from the left to the right, attack the player with an animation with fire. He has a lot of health, and can be killed by Shuriken.

All of these enemies have health, and put damage to the player, they also give health to the Player when they are dead.
All of these values change with the difficulty of the game.

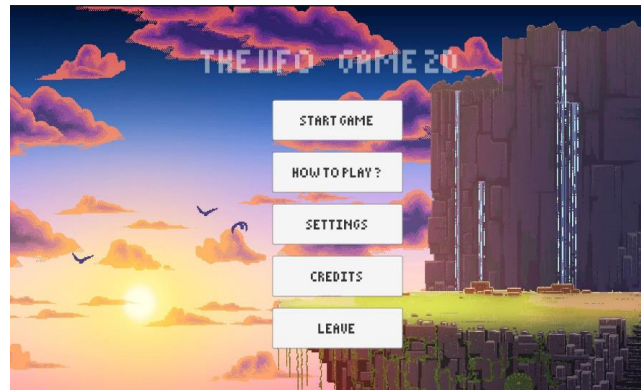
3. Story

The game starts with the Player spawning in the first level, and can run into other levels in order to run away from the place where he has arrived. The final level is the place with the boss, and by killing him, the Player will be able to win the game.

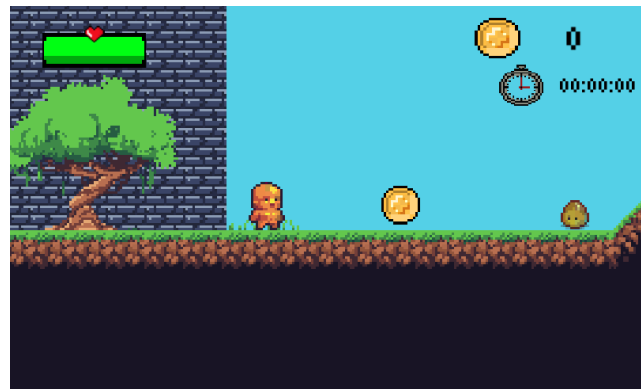
This game is more like a comedy, I mean the environment is colorful which give a feeling of happiness. Only the last level, which takes place in a dungeon can give a feeling of thriller.

4. Gameplay

The main goal of my game is to finish it as the fast as you can, and collect as many coins as possible.

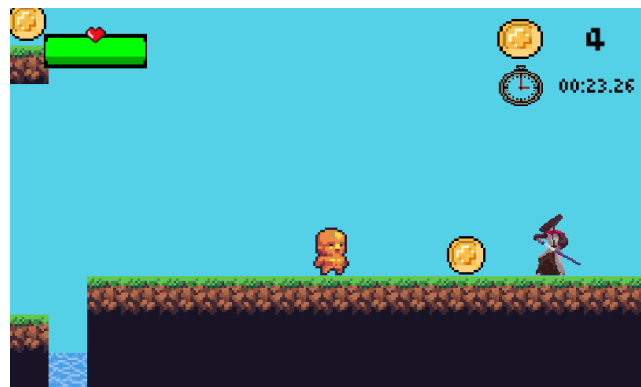


Screen of the Main menu

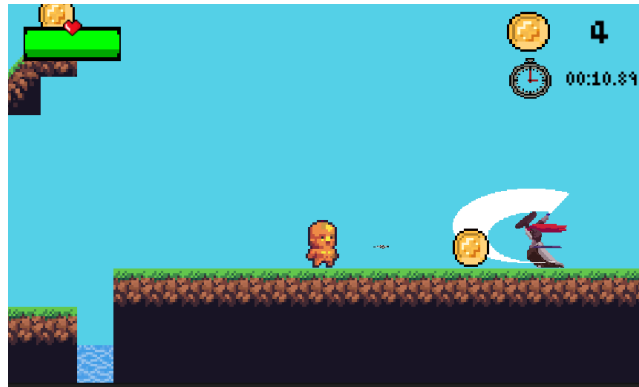


Screen at the beginning of the game

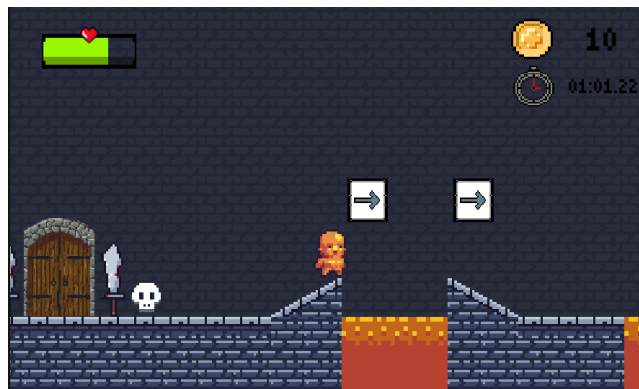
As you can see here, in the top left corner, there is the health bar of the player, which can allow him to know the quantity of life remaining. On top of that, there is a timer in order to measure your finish time until the end of the game. Of course, this timer and coin counter reset when the player dies.



Screen with coins, timer launched



Screen when the Player throws Shuriken and enemy attacks



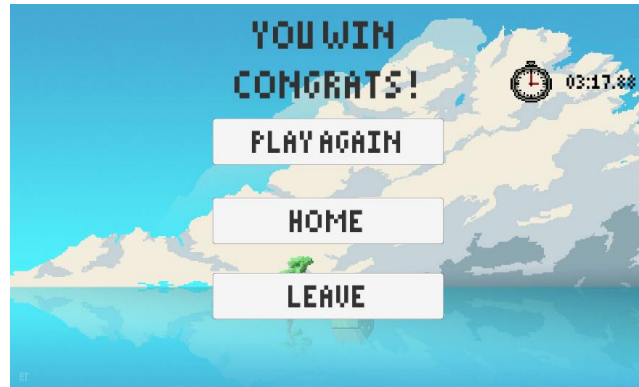
Screen at the final level with values changed

Win/Lose conditions:

In order to win the game, the Player has to reach the final door. However, the player can lose by being killed by an enemy or by falling into a death zone: water or lava.



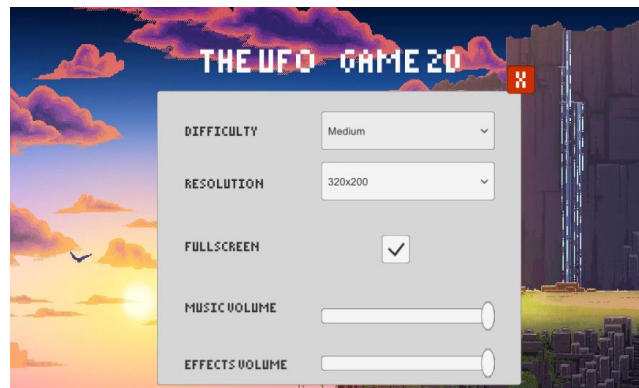
Screen when the player lost



Screen when the player wins

Difficulty:

As I explain before, you can change the difficulty of the game in the settings menu in the main menu. By choosing different difficulties, there are several parameters which change.



Screen of the settings menu

➤ **Easy:**

Player health:

- Health: 300
- Time of invincibility after being touched by enemy: 3f

Player movement:

- Move speed: 300f
- Time between Shurikens: 0.3f
- Damage: 100

➤ **Medium:**

Player health:

- Health: 100
- Time of invincibility after being touched by enemy: 2f

Player movement:

- Move speed: 250f
- Time between Shurikens: 2f
- Damage: 50

➤ **Hard:**

Player health:

- Health: 1
- Time of invincibility after being touched by enemy: 1f

Player movement:

- Move speed: 250f
- Time between Shurikens: 3f
- Damage: 30

There are also settings changing for enemies, but I'm not going to detail them so as not to spoil you and discover for yourself the change in difficulty!

5. Graphics

In this game, I used pixelated graphics. I think using Pixel Art is a good idea when making a 2D project, especially about render animations.

In my game, I have different animations, like when the Player is walking, climbing or dying for example. There are also animations for enemies: when they are hit, walking, shooting, attacking and dying too.

To create these animations, I used sprite sheet founded on Open Game Art, or I have created them (dying enemies' animations).

In the background in the game I created walls and foundations thanks to a sprite sheet. However, for the menu, I used images from the Internet and I put on its UI, Buttons, Text, etc.

6. Sounds

I think playing sounds in a 2D game is very important, in order to give the player more immersion. That's why I put a lot of different sounds in my game: music and sound effects.

Music:

- One at the beginning, when you launch the game.
- One for each level, changing when you enter in a new one.
- One when you finish the game.

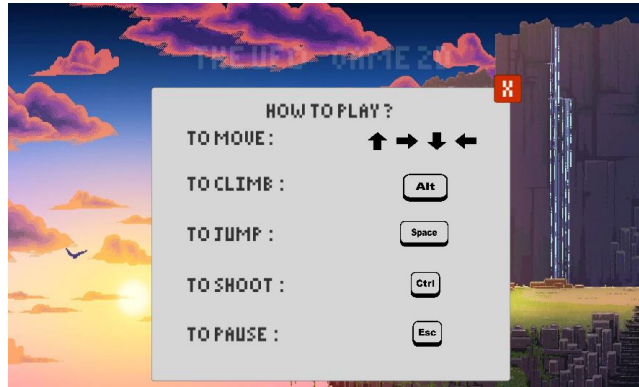
Sound effects:

- Throwing Shuriken
- Jump
- Enemy killed
- Touched by an enemy
- Bullet shot by soldier
- Entering in a new level
- Boss killed
- In the main menu, when you are hovering buttons and when you click on it

7. Technical conditions

At the moment, the game is only available on computer. I think this game could be ported to other platforms such as smartphones, because it's easy to play.

Concerning the controller required, you just need a mouse to navigate in the menu and a keyboard to play.



Screen about the Player controls

Player controls:

- To move: directional arrows
- To shoot: Ctrl
- To climb: Alt
- To jump: Space
- To pause: Escape

8. Advertising and finance

Because it's a little game, he will be free to play without inApp purchase.

For the moment, there is only one language, but with time, other could be available. Everybody can play my game, there is not a special audience.

9. Sources

You can find information on the Credits menu.