

# The Last Maya

*A game by Maël Delphin-Poulat and Paolo Fregi*



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*Special thanks to:  
Kacem Bekri  
Our Classmates (M2 MTI3D-IVI Laval 2024-2025)*

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## Overview

### ➤ Theme / Setting / Genre

- Ancient Maya civilization atmosphere
- “Only 1 hp” as Theme

### ➤ Core Gameplay Mechanics Brief

- Player movements in the scene
- Crystal with 1 hp
- Building defenses
- Blocking projectiles

### ➤ Targeted platforms

- PC Windows

### ➤ Project Scope

- From 17 to 27 October 2024
  - 6 - 8 days of work

- Team

#### Maël

- Main scripts :
  - Player Movement system
  - Score
  - Projectiles movement
  - States Machine controller
  - Waving in Emissive bloom effect
  - Camera traveling
- UI canvas
- Video editing

#### Paolo

- GDD editing
- Main scripts
  - Crystal collision system
  - Mouse Scroll Wheel zoom in/out system

- Emissive bloom effect
- Assets 3D:
  - Player
  - Shield
  - Crystal
  - Altar
  - Temple
  - Projectiles
  - Meteor
  - Terrain and Trees
  - Idols

### ➤ The Elevator Pitch

Play as The Last Maya and defend the Crystal with all your strength, the ancient civilization only has the last relic and is trying to defend itself from settlers, the Crystal is weak, one single damage would destroy it, and it would be the end of the Mayas.

### ➤ Brief Project Description

The Player must defend the Crystal at the center of the scene from the projectiles appearing from all around.

### ➤ More detailed Project Description

There are 4 different types of projectiles :

- Swords
- Arrows
- Cannon balls
- Meteor

Each type of projectile has its different speed.

In order to defend the fragile Crystal from the shots, the Player can build up temporary walls or block the shots with his shield.

When a projectile catches the Crystal, this one cracks and breaks up.

Once the Crystal is broken, the last remaining relic of the civilization is erased and the game is over.

Score goes up by surviving longer. Destroying projectiles with walls gives the Player bonus points.

## What sets this project apart?

- Defense game with a character and not a god player
- Defense tools are limited in number and in time
- The objective to defend is very fragile

## Gameplay

- Once in the menu, the Player can access a Tutorial or directly start the game. Once in game, the player has a MOBA point-of-view and moves with ZQSD. He can also place walls with the *spacebar* key. Projectiles appear and go towards the Crystal, the player has to defend it with short-lived walls or by blocking them with his own shield.

### ➤ Core Gameplay Mechanics

- Player movement
  - The player move with ZQSD and place walls with spacebar key
- Objective
  - The objective is to defend 1 gameObject, the Crystal, which has only 1 hp
- Defense system
  - The player can block the projectiles with his own shield or by placing walls
  - Walls are short-lived. They have 4 hp and lose hp by blocking projectiles or by being in the scene for too long. This prevents a situation where the Player would have too many walls around the Crystal.
- Scoring
  - During the game, the Score gets bigger:
    - along the progression of the time
    - each time a wall blocks a projectile (bonus points)
- Game end
  - The game ends when the Crystal is destroyed or when the meteor (final projectile) is defeated

## Assets Needed

*All scripts and assets have been made by ourselves.*

*Generative AI has been used, but only to have some templates to modify and adapt them to our project.*

*The font is commercial use free.*

*The music and sounds are also royalty free.*

### ➤ 2D

- App Icon for Windows Desktop

### ➤ 3D

- Character
  - Player “The Last Maya”
  - Shield
- Environmental Art Lists
  - Terrain
  - Trees
  - Temple
  - Altar
  - Projectiles
    - Arrow
    - Sword
    - Cannonball
    - Meteor
  - Crystal made of multiple fragments. This makes possible the breaking of it when it collides with a projectile.

### ➤ Music and Sounds

- Ambient
  - yucatan jungle.mp3 by folkart films  
License: Attribution 3.0  
<https://freesound.org/s/122767/>
  - Radiant Resonance made on  
<https://www.loudly.com/>

## ➤ Code

- Projectiles x4
- Player, animation movement, interactions
- Camera traveling
- Crystal breaking with collisions
- Crystal emissive and waving bloom effect
- State manager
- Score manager
- Wall (hp, interactions, changing materials/colors)

## ➤ Animations

- Environmental Animations
  - Transition animations (canceled)
- Character Animations
  - Player
    - Movement forward
    - Movement backward

## ➤ Colors

- BUTTONS  
FFC200
- BACKGROUND TUTORIAL  
D4B38F
- SOIL
  - Grass01  
9d9756
  - Grass02  
a2965a
  - Mineral01  
e7d6c2

- Mineral02  
e1cbb1
- Dirt01  
ac9d8c
- Dirt02  
9a8d7f
- TerrainForest01  
41372b

## Schedule

### ➤ Models and textures

- From day 1 until 2 days before the delivery deadline
  - Work on MagicaVoxel software for the creation of the 3D assets
  - Work on Blender for some small modifications in the 3D models
  - Parametric generation on Unity for the Terrain and Trees

### ➤ Game code

- From day 1 until 2 days before delivery deadline
  - State manager
  - Simple unconnected scripts
  - Score manager and connected scripts
  - Global game manager

### ➤ Trailer video

- Between half a day and a day
  - Defining the Camera traveling
  - Coding the C# Script for it
  - Recordings
  - Video editing



## Gamer Motivation Model

### GAMER MOTIVATION MODEL



Action "Boom!"	Social "Let's Play Together"	Mastery "Let Me Think"	Achievement "I Want More"	Immersion "Once Upon a Time"	Creativity "What If?"
<b>Destruction</b> Guns. Explosives. Chaos. Mayhem.	<b>Competition</b> Duels. Matches. High on Ranking.	<b>Challenge</b> Practice. High Difficulty. Challenges.	<b>Completion</b> Get All Collectibles. Complete All Missions.	<b>Fantasy</b> Being someone else, somewhere else.	<b>Design</b> Expression. Customization.
<b>Excitement</b> Fast-Paced. Action. Surprises. Thrills.	<b>Community</b> Being on Team. Chatting. Interacting.	<b>Strategy</b> Thinking Ahead. Making Decisions.	<b>Power</b> Powerful Character. Powerful Equipment.	<b>Story</b> Elaborate plots. Interesting characters.	<b>Discovery</b> Explore. Tinker. Experiment.

**1 - Strategy 60%**

**2 - Challenge 40%**

## Mood board

Diablo Immortal screenshot

- Interesting Camera point-of-view
- Emissive Materials / Glow Bloom effects



Image generated on Stable Diffusion



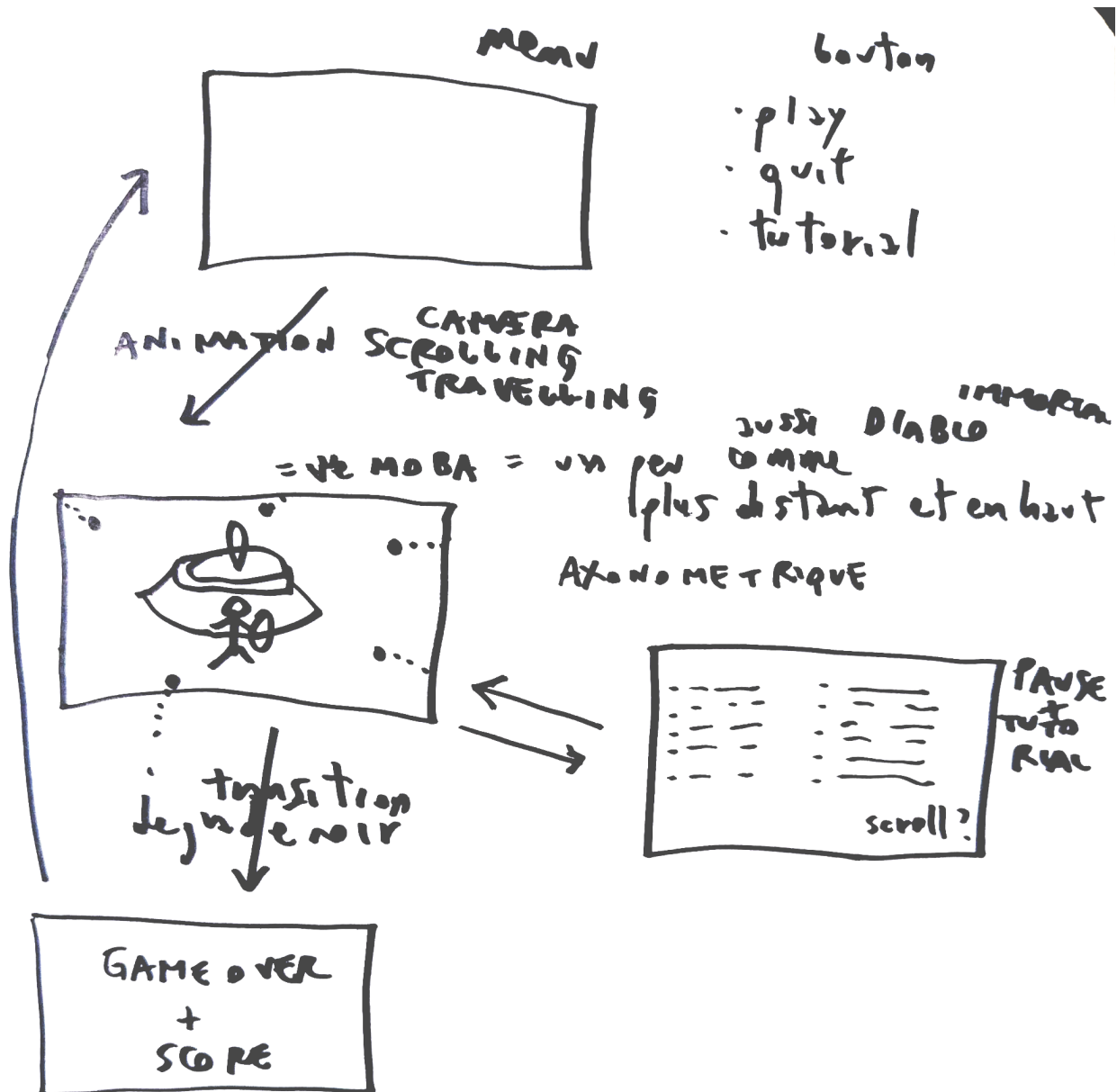
Head adornment

Le Honduras, Copan

Maya civilization, 7th-10th century

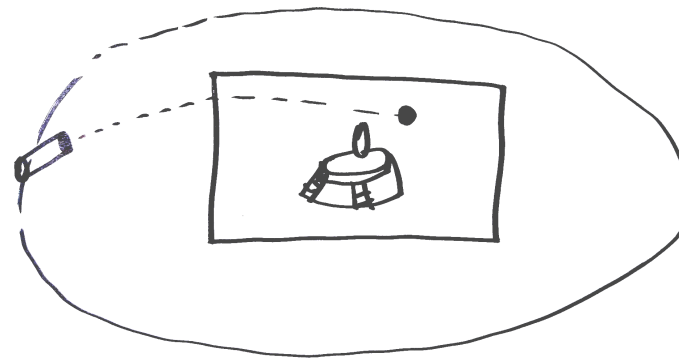
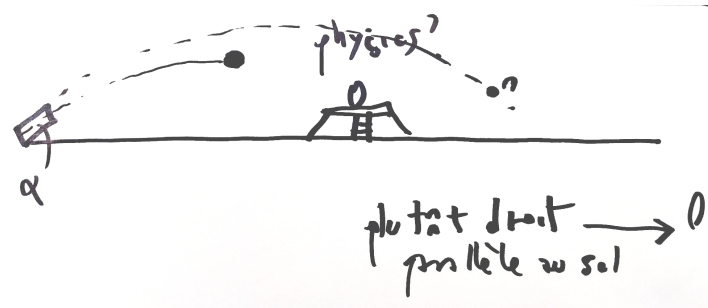


# States Machine



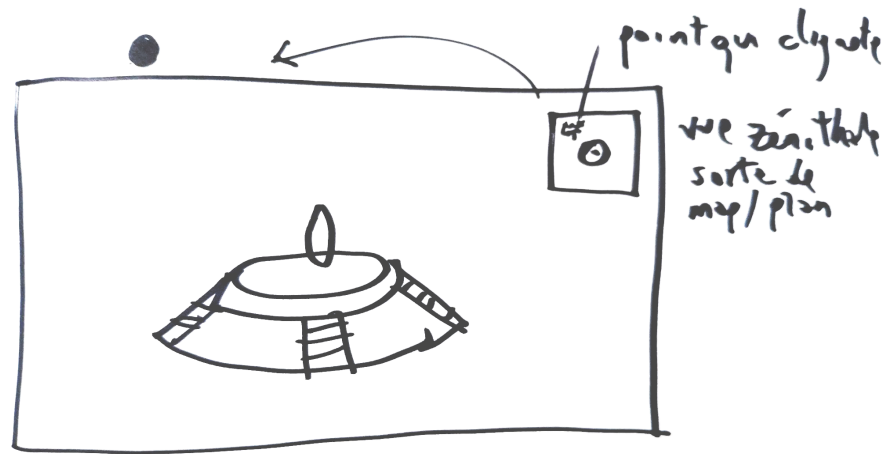
## Technical Locks

- 1) How to make a random projectile spawn ? Are we doing realistic projectiles or making them move on a line. Realistic might be more complex. We could maybe implement random modification to trajectories.



jouer sur réglage  
vitesse et dynamisme = tester

- 2) About the objects we need to spawn, do we have to get them in the scene 1st to duplicate them ? or is there a way to create them? We could possibly have a 3rd person view and a map but adding it might be complicated



- 3) We need to think about how can we use the same canvas for pause and tutorial but still come back to the game if we were in the game, and in the menu if we were on the menu.