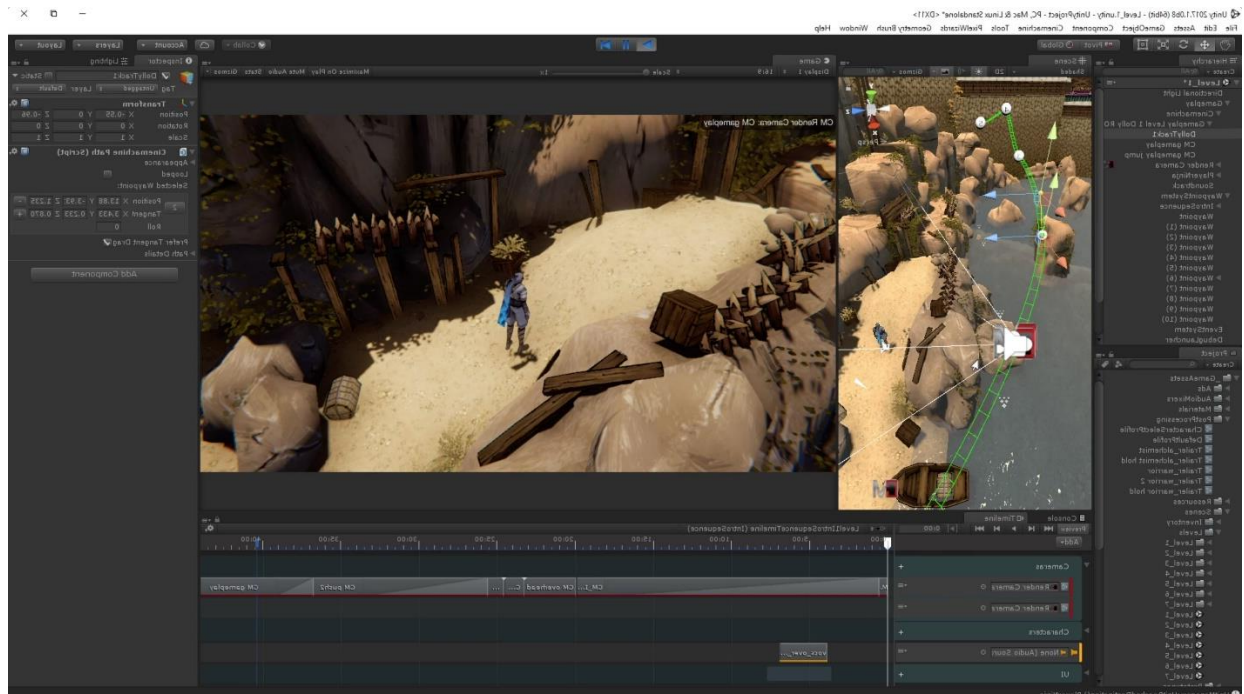


PROJECT X: GAME DEVELOPMENT

NAME: YOSHUA KOCK

COACH: JAN SALGE



Context

Assignment:

I will research, design and hopefully by the end have a 3D platformer game created. This will include character and environment design, prototyping in Blender, coding the game, and having it all tested and reviewed by users.

Reason:

I always had interest in game development. Given I spend my free time playing games, I always had ideas for games but never really delved into creating one. This project will challenge me into doing just that and help me in the future if I do want to keep making games. A 3D platformer is the first idea that came to mind, so I will stick with that as it saves time from doing any more research on other options.

Objectives:

1. To gain experience in game development.
2. To improve my skills in 3D modeling, game design, and coding.
3. To develop a playable demo for users to interact with.

Problem Statement and Methodology

Problem Statement (Main research question):

How can I design a 3D platformer game that is both visually appealing and engaging for users?

Sub-research Questions:

1. What are the current design and gameplay trends in 3D platformers?
2. How can I rig and animate a 3D model?
3. How do I make the gameplay work in the game engine?

Methodology:

To address this problem, I will follow these steps:

1. Exploratory Research:

I will explore examples of 3D platformers and gather insight into user preferences. I will also research the tools and techniques in game design and development.

2. Ideation and Prototyping:

Using Blender, I will create prototypes of characters and environments.

3. User Testing:

I will involve peers and potential users in the testing phases, collecting feedback to refine gameplay mechanics and design.

4. Development:

The game will be developed in Unreal Engine as it's the game engine I can export my Blender work into and code in JavaScript, which is an option I researched for Unreal Engine plus I am already learning and working with JavaScript which makes things easier instead of learning an entirely new language.

5. Documentation and Reporting:

I will document my process and progress in a version control environment like Git, for the purpose of maintaining clear records of iterations.

Deliverables and Planning

Deliverables:

Must have:

- Document the development process, research findings, and lessons learned.
- Using Gitlabs for version control to show code, Blender assets and README file to explain the progress and structure of the project.
- Create a simple slime/blob character model to reduce complexity and time in rigging and animation.
- Design a basic platformer environment (background, platforms and some obstacles)..

Should have:

- Implement a basic prototype of the platformer in a game engine (Unreal Engine) with basic movement of character and interaction of environment.

Could have:

- Polished animations for character.
- More detailed work for environment.
- Work on the sound design of the game.

Won't have:

- A fully developed game, or stage one, with enemies and complex AI and physics

Sketches:

