

ROBINOBI

A 3D Platformer
DEVELOPED BY:

The Fighting Mongooses

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Game Overview

Robinobi is a 3D platformer in which the player utilizes a variety of horizontal and vertical movement mechanics to traverse their surroundings in a fun and challenging way.

Robinobi borrows nearly all of its basic movement mechanics from Nintendo's 1996 game *Super Mario 64*. As a student project, this was done for ease of reference, and because most of the team believed that said game's movement mechanics remained near the top of their class in 3D platforming. Implementing such refined movement (*Super Mario 64* spent over 3 years in development with a professional team) from scratch in a modern engine was expected to be a challenge, and it did not disappoint. Despite the advances in engine technology and prebuilt asset solutions, achieving a fun and fluid platforming experience was difficult due to how easy it was to break up said fluidity with "clunky" physics and controls. In the end, the group gave its best effort to smooth out that clunkiness with the time it was given.

Game Objective

The player controls a robot named Robinobi, who is tasked with collecting "Gold Slimes" from the main Desert level. As Gold Slimes are collected, the second and third levels unlock where the player can obtain grappling hook and speedbooster abilities. Using these, the player can open up two sub-areas of the Desert - the Oasis and the Magma Cave - where more Gold Slimes can be found. Obtaining Gold Slimes progresses the story in the hub world- consisting of a large field and a tower- and collecting them all allows the player to progress to the top of the hub tower and view the ending. An NPC named RB is placed inside the hub tower to offer direction to the player should they become confused.

Core Mechanics

Basic Movement:

Jump - Jump into the air. The longer you hold the jump button, the higher the apex of your jump becomes.

Crouch - Hold the crouch button to enter a slow-moving sneak state.

Backflip - While standing still and crouching, press jump to backflip up a great height. This is useful for performing a very high jump without chaining normal ones.

Long-Jump - While moving and crouching, press jump to leap forward a great distance.

Triple Jump - Jump twice in a row from the ground to obtain a higher apex each time. Jump three times in a row to reach the maximum possible jump height.

Standing on the ground too long resets your jump “level.”

Wall Jump - Jump into a wall, and press jump again as you collide with it to kick off the wall and reach higher locations.

Bullet Time - Hold down a button to enter a short bullet time where you can aim your grappling hook. The bullet time expires after 4 seconds.

Powerups:

Items obtainable within levels 2 and 3. These upgrades are permanent.

Grappling Hook - Using the camera controls, aim the red marker over a distant grappling surface until it turns blue, then press the grapple button. A blue slime fires from Robinobi's arm and latches onto the surface. From here, the player may choose to pull themselves toward that surface, or crouch-walk backwards while attached to generate tension in the rope. Jumping from this tense state sends the player flying at much higher velocity.

Speedbooster - Hold down the speedbooster button to slowly build up speed until you're moving at twice your normal speed. From this state, your jump distance is doubled as well, and you can break through a special wall.

Interaction:

Switches - A few Gold Slime challenges require the player to stand on a switch to activate something in the level.

Portals - Entering and exiting different areas is done through red portals that the player must simply collide with to trigger a scene transition. Some area transitions have doorways or bridges instead of portals.

Signposts - Signs display information as text bubbles if the player stands near them.

NPCs - A button prompt appears near some entities to allow the player to talk to NPCs. NPCs may give direction, hints, or just flavor.

UI:

Gold Slime Count - Displays how many Gold Slimes the player has found.

Pause Menu - Allows the player to return to the main menu, change video or audio settings, or continue the game.

Minimap - A small circle in the bottom right corner shows NPC, enemy, and portal locations relative to the player.

Controls

Gamepad:

Default Controls



Keyboard:

Movement - WASD

Crouch - Left Ctrl

Pause - P

Grapple - Left mouse

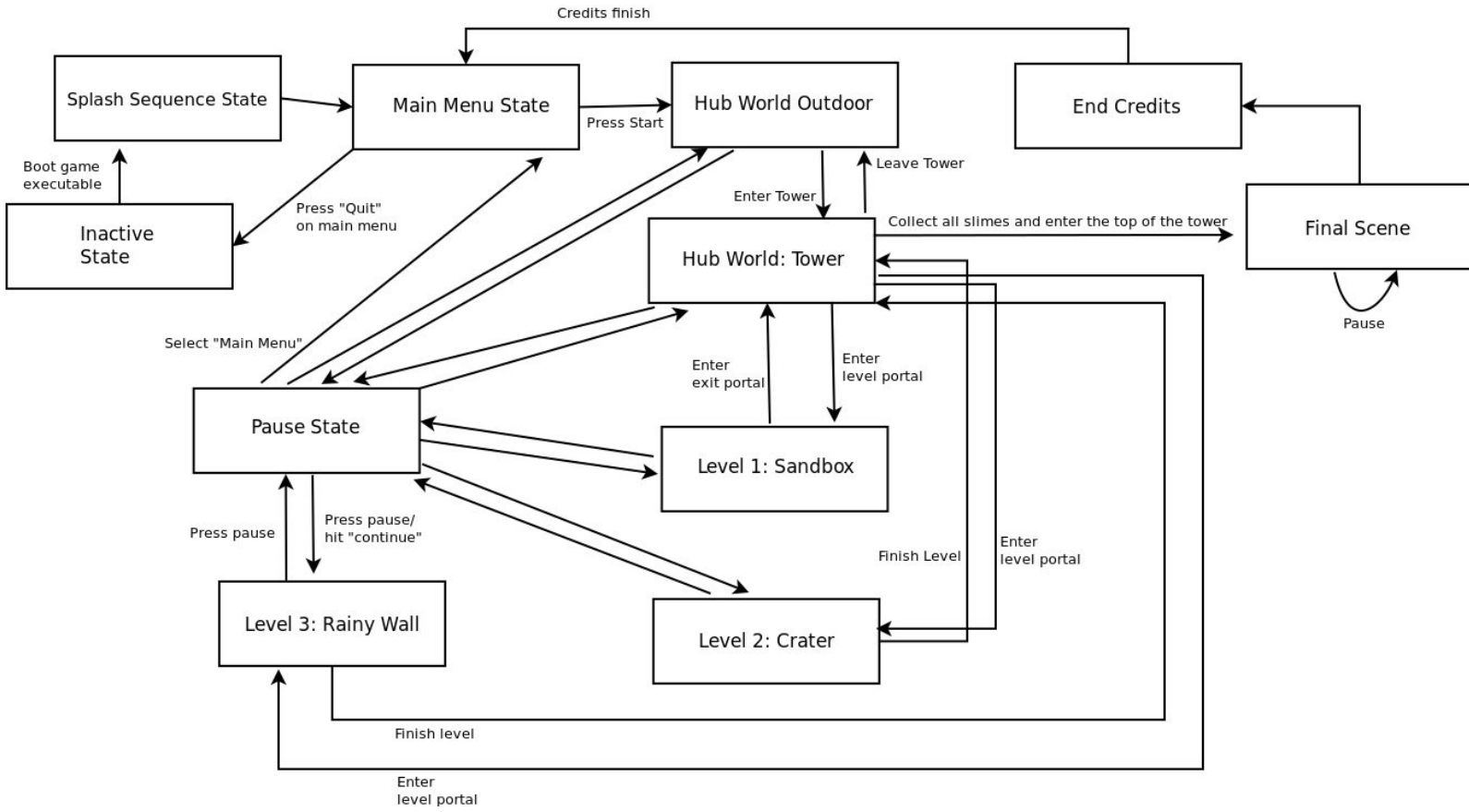
Jump - Space

Speedboost - Left Shift

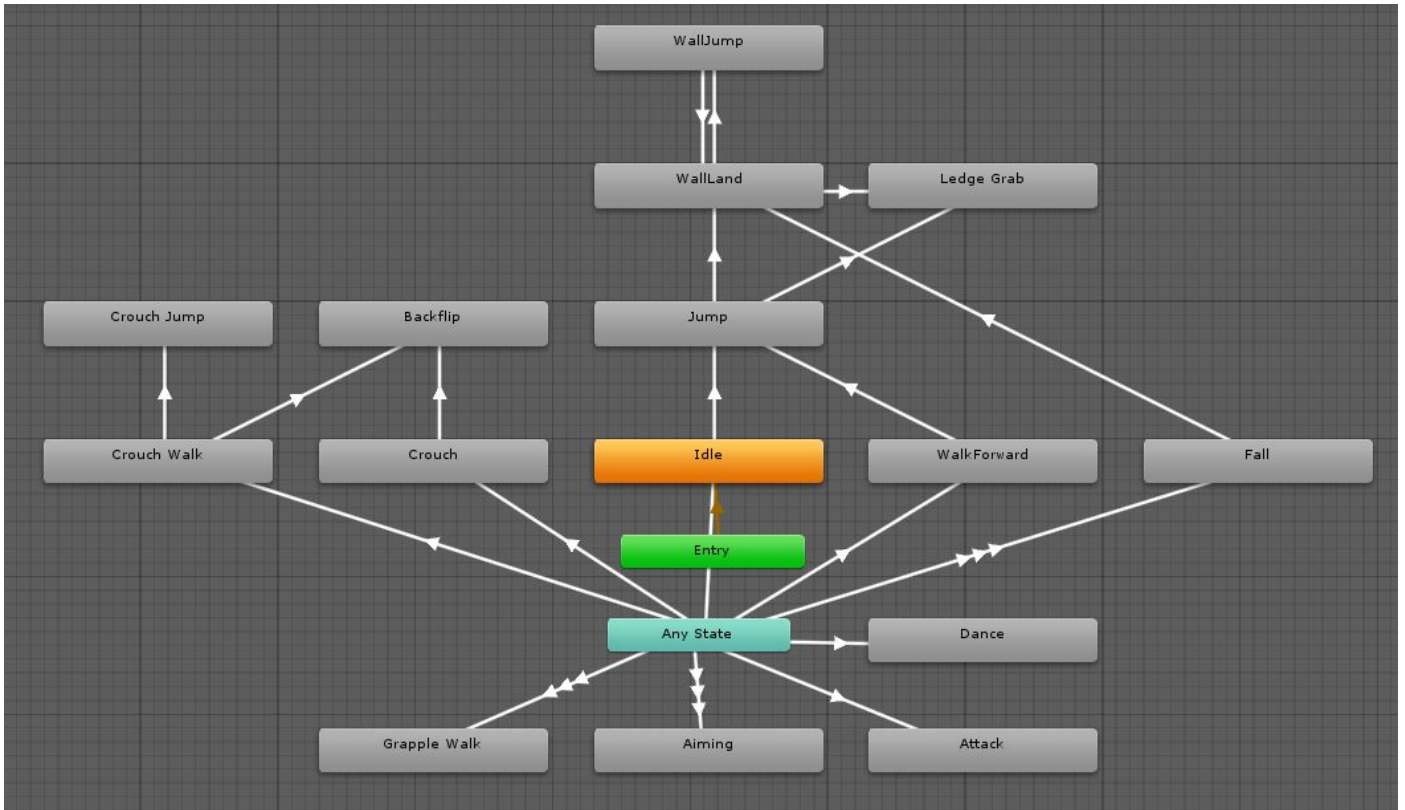
Camera - Mouse movement

Bullet Time - Right mouse

State Diagrams



Game State Diagram



Player Animation State Diagram

World Design

Story:

The player controls the titular Robinobi, or Unit 6259, robotic “employee” of the terminally-industrious X-S Tech Corporation. After a series of disastrous investments in failed technologies over the decades, the company has been reduced to a black market peddler. They now aim to “borrow” from various planets the most unique minerals and organic materials, so that they may replicate and sell them. They have taken an interest in this game’s planet for its slime creatures, many of which have a unique and powerful property. An outdated model, Robinobi lacks the advanced capabilities of his newly-constructed peers, but it’s up to the player to make up for that with skill and determination.

NPCs:

RB - Robinobi’s equally robotic boss, who oversees operations from within the hub tower. She’ll chastise the player for failures and direct them to their goals. In a much longer version of the game, she would become the main antagonist after the first few hours of play.

Andrinja - A fellow retrieval bot many generations ahead of Robinobi. He doesn’t think highly of old models, and will antagonize the player in the final level after he is possessed by the Ghost.

The Ghost - This dark entity follows the player’s every move, endlessly seeking their position. It spawns midway through Level 2, and will kill the player on contact as they try to escape back up the crater. The Ghost continues to appear in the story afterwards as an antagonist. In a twist at the end of the game, the slimes the player has been collecting are pieces of this weakened demon, and it wants them back.

Passive Slime - This intelligent slime will not attempt to bother the player. Each one has a different set of dialogue lines.

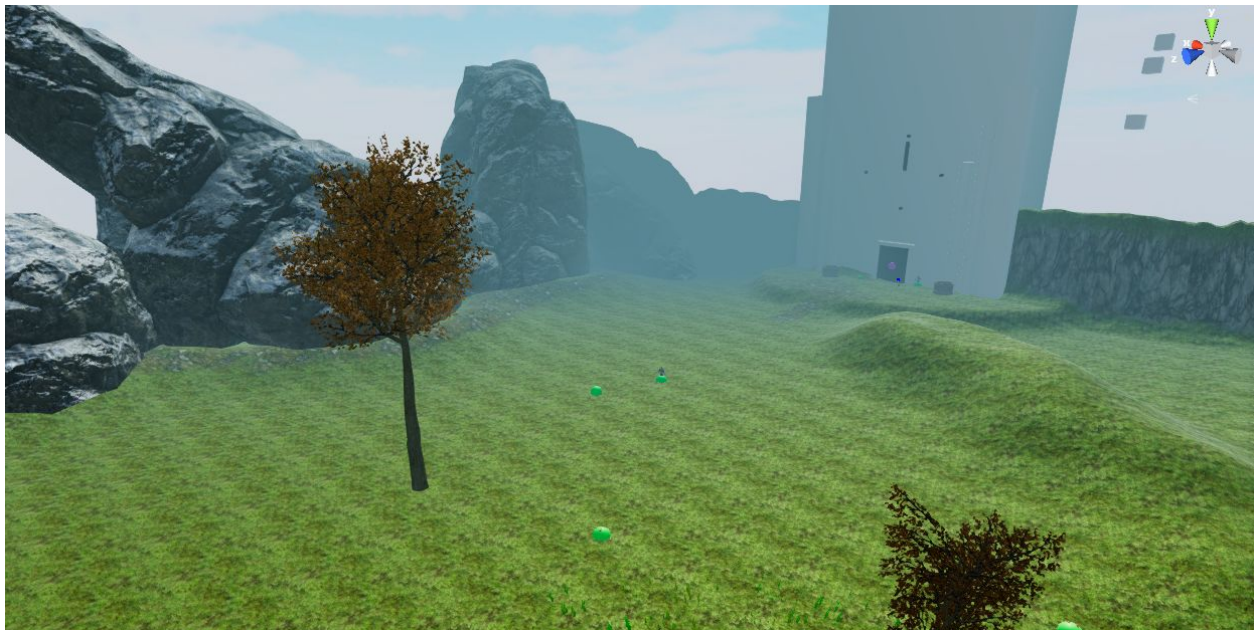
Bonk Slime - Upon seeing the player, this enemy chases them and attempts to bump into them. The bouncy material of the slime will send the player flying. They will typically be placed on platforms above bottomless pits or water.

Bomb Slime - When the player wanders too close to its home, this slime flies out and begins to follow them. It explodes on contact, killing the player and itself. The player's goal is to guide this slime to an object they wish to destroy.

Levels

Hub World:

A “playground” and narrative delivery area with indoor and outdoor areas. The outside contains some harmless slimes the player can interact with, as well as a simple movement training area. A large tower sits on the edge of this map, which is the indoor hub. The inside of the tower contains several portals leading to the main levels, and the RB character.



Level 1 - The Desert:

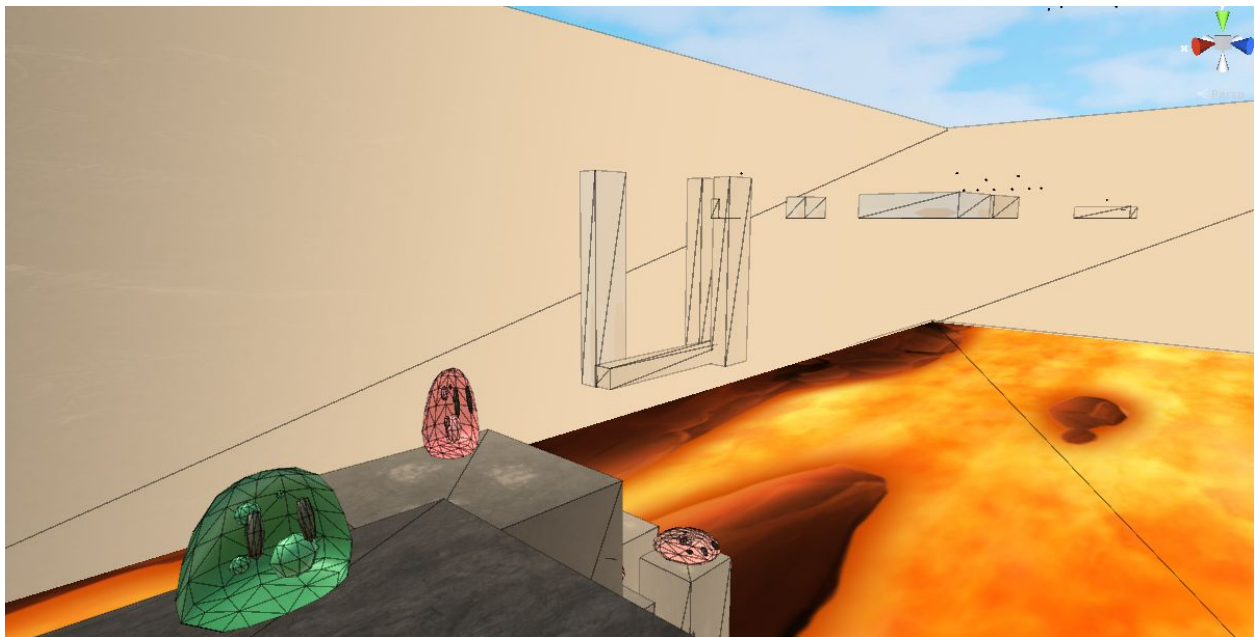
A literal desert sandbox broken into three areas. This level contains all of the collectable Gold Slimes that are the main objectives of the game. Each Gold Slime is placed in a hard to reach location, testing the player's mastery of the platforming mechanics. The first area's slimes only require the basic movement mechanics to reach. The grapple hook is required to reach the second area and obtain the slimes scattered there, and the speedbooster to achieve the same in area 3.



Level 1 - Oasis: A sub-area of the Desert. The grappling hook is required to reach this area, and obtain its Gold Slimes by clearing large gaps.



Level 1 - Magma Cave: A sub-area of the Desert. The speedbooster is required to reach this area and obtain its Gold Slimes by jumping much farther than normal.



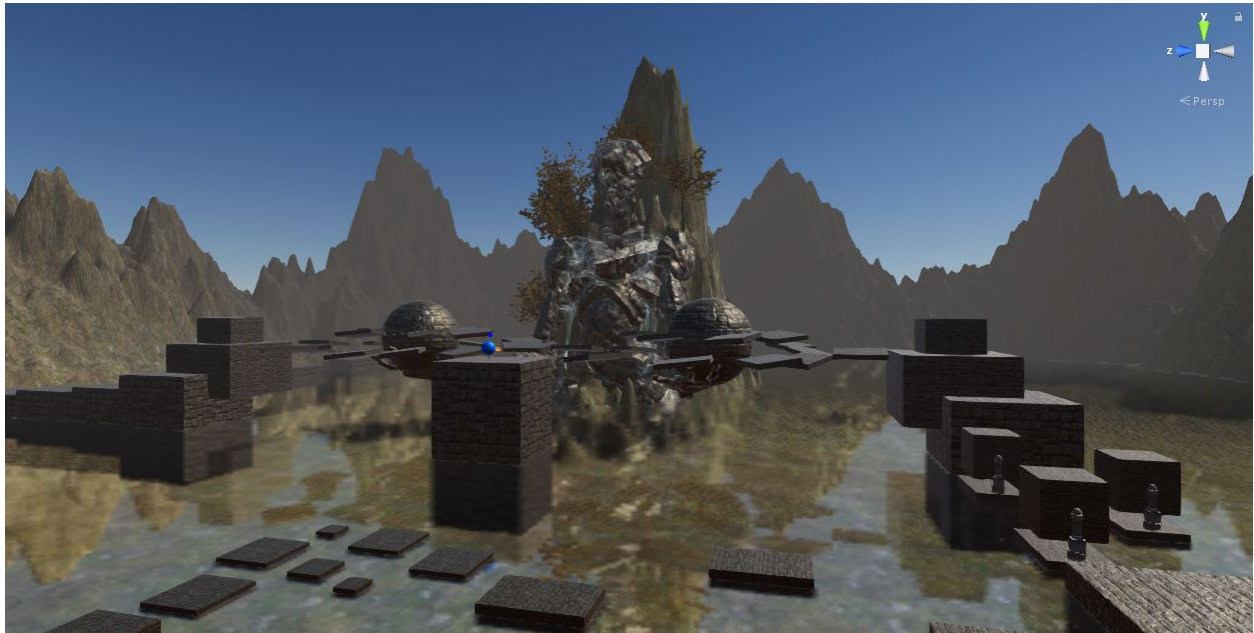
Level 2 - Crater:

A confusing descent into a massive crater. Collecting the grappling hook power-up at the bottom spawns a “ghost” version of the player that chases them by copying their every move a second behind them. The level is completed by reaching the top of the crater again. Touching the ghost is instant death.



Level 3 - Rainy Lake:

The player obtains the speedbooster power-up midway through this level. Trapped by a possessed Andrinja with 90 seconds until the area is destroyed, the player must use the speedbooster to race to the end of a long obstacle course and escape the blast radius.



Asset Credits

<https://assetstore.unity.com/packages/3d/proto-pack-50444>

<https://assetstore.unity.com/packages/3d/characters/robots/space-robot-kyle-4696>

<https://assetstore.unity.com/packages/3d/characters/robots/runner-bot-13610>

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<https://assetstore.unity.com/packages/2d/textures-materials/sky/allsky-10109>

<https://assetstore.unity.com/packages/essentials/asset-packs/standard-assets-32351>

<https://assetstore.unity.com/packages/vfx/shaders/mk-glass-free-100712>

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<https://assetstore.unity.com/packages/vfx/shaders/lava-flowing-shader-33635>

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<https://assetstore.unity.com/packages/3d/environments/industrial/modular-factory-environment-d-113554>

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Audio:

<https://assetstore.unity.com/packages/audio/music/orchestral/ultimate-game-music-collection-37351>

<https://assetstore.unity.com/packages/audio/sound-fx/universal-sound-fx-17256>

<https://freesound.org/people/InspectorJ/sounds/402656/>

<https://freesound.org/people/speedygonzo/sounds/257649/>

<https://freesound.org/people/lwdickens/sounds/260065/>

<https://freesound.org/people/TiesWijnen/sounds/341798/>

https://freesound.org/people/deleted_user_2731495/sounds/384483/

<https://freesound.org/people/josepharaoh99/sounds/367997/>

<https://freesound.org/people/FunWithSound/sounds/394898/>

<https://freesound.org/people/JohnsonBrandEditing/sounds/243376/>