ROBOTIN

Game Design Document
Watchmakers

STAGE ONE : CONCEPT

Game Summary

ROBOTIN is a vertically scrolling game, divided into six levels. The player controls Robotín, with jumping as the main mechanic,and recovering modules at the end of each level, unlocking new mechanics.

Game Lore

Robotín, an abandoned piece of machinery left to rot in the depths of the facilities he was created, has awakened from its slumber, discovering strange warps through space and time that teleport him between areas of this cursed place.
Urged by the dying battery that still powers him, Robotín must advance through the portals to regain energy and discover once and for all what really happened.

STAGE TWO : SPECIFICATIONS

Art Style

Pixel Art - 16x16
Basic Palette:

| #1f1f29	#413a42	#596070
#96a2b3	#eaf0d8	

Game Mechanics

Basic Mechanics:

- **Tap to Jump (press screen to jump higher):** given that the boosters on his metallic legs are still working, Robotín can jump extremely high, although the power calibrators are broken. The player will be able to change the height attained by the jumps depending on how long they press the screen, with a visual cue in the form of a scroll bar that fully fills up after pressing for five seconds, located under Robotín. The moment the player presses the screen, the direction of the jump will be determined by the direction robotín is facing, which compliments the following core mechanic. The angle of the jump is fixed, and it can not be vertical. This behavior is similar to *Jump King's*.

- **Automatic left to right movement:** whenever Robotín is standing on top of a platform, he will automatically start moving left to right, avoiding falling and colliding with the walls in his way, changing directions. The player will not be able to change the walking direction, and Robotín will only stop moving when charging a jump.

- **Bumping into walls:** in the case a jump is interrupted by colliding with a wall that does not allow for WallJump or other objects that are part of the scenery, Robotín will bounce off the wall slightly. This mechanic can also be exploited by the player to perform more intricate jumps, and is also very similar to the one portrayed in *Jump King*.
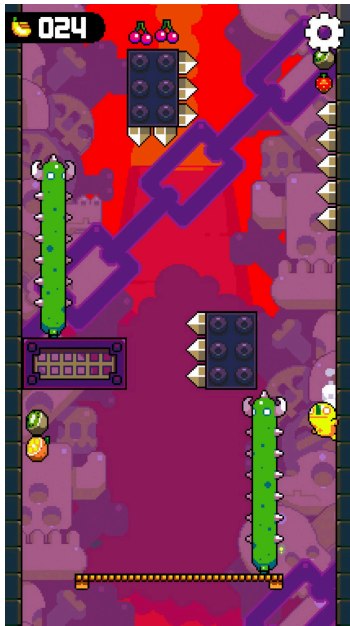
- **Vertical Scroll:** Robotín will have to make through the complex of the facilities before the battery that constantly feeds him expires, forcing the player to advance both quickly and steadily. One misstep may signify their demise. The portal to advance to the next level is always positioned in the upper part of the level, producing a vertical
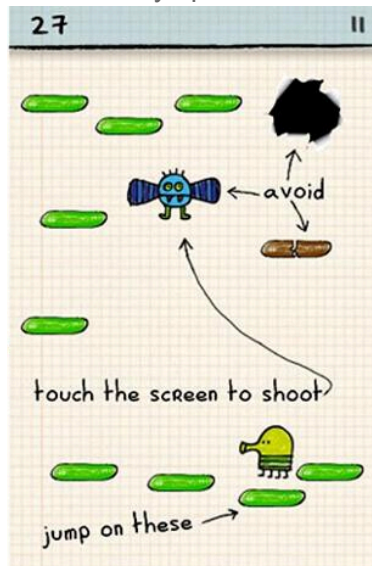
traversal.

Level/World Mechanics:

- **WallJump:** enables the ability to perform a jump off specific walls from the first level onwards. Robotín will begin to slide when colliding with a wall that allows for WallJump until he hits the floor. The player has the possibility to, similarly as the regular jump, press the screen to charge a jump. This jump will be directed to the opposite direction

from facing the wall, and has a greater horizontal component than the regular one.

- **Wind mechanic:** A new mechanic appears from time to time where all the level is surrounded by wind particles, you can see these particles at all times but from time to time you will see them moving horizontally applying a force that moves the player in that direction. This directly affects the player movement and its jumps, applying a constant force from the beginning of the event to its end, enhancing the game's dynamism and strategy. This mechanic is present in titles like *Celeste* and *Jump King*. It is detectable through visual and audio feedback.

- **Up draft:** this new mechanic similar to the previous wind mechanic is a place on the map where at all times there is a vertical wind current that helps you propel yourself vertically with a lot of force, acts like a type of jump boost on area. Affects directly the player, summing an extra value to its jump force, and reducing the gravity scale if remaining within the zone when falling. It is designed

- **Not supportive walls :** This is a type of wall that will be highlighted in a different color and will disable the option of wall jump from it, leaving you only with the option to fall onto a platform to continue with your journey. The player will collide with them when jumping into them, possibly obstructing certain routes or difficulting the advance through the level. Can be detected via the sprite.

- **Scoring System:** throughout each level, three coins are positioned in specific places which will increase the score of the player, preserved through levels. Each coin will provide ten points, which will be interchangeable in the store with color filters that apply to the whole game.

- **Timer**: Robotín is urged by a dying battery to advance. A variable timer is initialised at the beginning of each level, restarting the level if the timer effectively expires, adding

urgency to the game and forcing the player to advance and strategise their approach.

- **Endless looping:** when completing the sixth and final level, the game loop will bring the player to the first level again, although the availability of all levels will be explicit in the level selector. The game is endlessly loopable, and the present different routes to take in each level avoid repetitiveness, at least in the few first loops of the game.

- **Sensory feedback:** there is dust in suspension accumulated through the years within the facilities. The strong currents that now inhabit the hollow interior of the buildings indicate the direction and force of the wind, added to their howling. Also, Robotin's jump force is indicated through an animation and change of sprite.

UI Design

For the UI design, our goal is to create an interface that minimizes distractions from gameplay. Key elements, such as the score display and pause menu, will be positioned at the top of the screen for easy access without interfering with player focus. On the level selection screen , we will use doors, each one with the number of the level and a shop button on the lower part of the screen to buy different cosmetics. As for controls, we aim to keep them intuitive by avoiding an on-screen UI overlay. The game will feature "automated movement," requiring only a jump action. Players can initiate jumps by pressing the screen. We will use mostly monochromatic colors (mainly black and white) to maintain the aesthetic of the game.

Audio Design

Considering the minimalist modern flat design style combined with 16x16 Pixel art, the audio must resonate with the contemporary and highly reactive art style with a "video game" retro aesthetic. The game's music will blend modern electronic elements with retro chiptune influences, creating a unique sonic identity that matches our minimalistic visual design while maintaining an engaging, casual gaming atmosphere.

Music:

The menu soundtrack will integrate A short opening intro for the Splash screen.

Upon Revision, we decided to scrap the depth-adaptive music implementation. However, we will still build the scripts with the ability to scale to be able to do adaptive music.
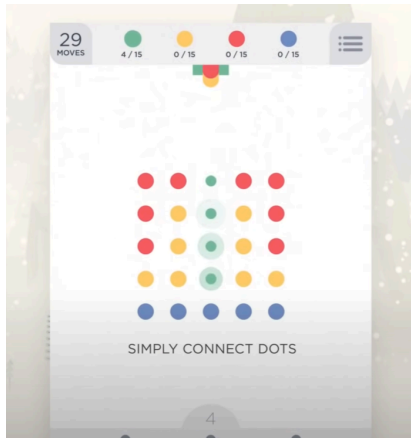
Each level features a different soundtrack, both energized and relaxed, Duration: a 3-minute loop with crossfade transitions

In general:

- Upbeat electronic pop with minimal percussion

- Bright, positive tone using modern synth sounds

Duration: 1-minute loop

Reference: "Two Dots":Two dots GamePlay

SFX:

Will create the sound effect system based on Scriptable Objects, using them as a sound group, to achieve sound variation for a single action, for example when the player hits the ground, or walks, it will not be the same sound all the time therefore reducing repetitiveness; At the same time the it can also be used as a category for sounds, and the game logic can call a specific sound clip within a sound group. When playing Sound Groups the next sound clip to be played can be selected randomly or sequentially.

- Button Clicks: Soft, modern 'pop' sounds
- Swipes: Light whoosh effects with minimal reverb
- Reference Library: "Mobile UI Essentials" by Pro Sound Effects

Core Interaction Sounds:

We will implement the Player sound effect with more detailed interaction types with sound variations based on sound groups

- Jump_Charged: Clean, punchy synthesized clicks
- Jump_Release: a descending sound indicates the release of the jump
- Level Complete Feedback: Bright, ascending electronic tones
- Failure Feedback: Soft, non-punishing descending tones
- Stick on a wall: a light pop sound for a clear wall interaction cue
- Landing: Feedback for the player landed on the ground
- Turning: there's a crisp pop every time the player turns when reaches the edge of a platform.
- Score Counter: Light 'ping' sounds.
- Reference: SFX from "Dots & Co" Dots & Co reference

Ambient Sound:

With the help of the Sound group system, we can have an ambient/environment sound system where it can play loopable short ambient noise tracks as a sound group, so it can seamlessly switch different sounds with nuanced differences, to provide the fine polishing on ambient sound a good atmosphere in a game needs. Also Can be played back randomly or sequentially according to the needs (predictability); it will be similar to the SFX Manager however different features are required: Crossfade when switching sound clips, support of one-shot sound effects as well, to separate the environment sfx away from player logic.

Characteristic:
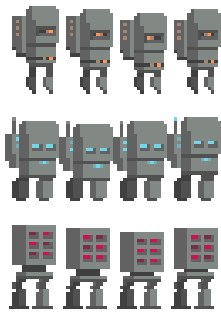A series of deep but subtle mechanical engine-type sounds with harmonic distortion.

Asset Requirements

- Art
  Character sprite
  Coin sprite
  Platform Sprite
  Background menus Screens
  Portal animation
  Robotin animation (based on time)
  Particles sprites
- Audio
  Background music
  Engine sound
  Robotic sound
  Jump sound effect
  Buttons sound effects
  Bolt / Powerup sound effect
  Wind noises
  Collected sound effect
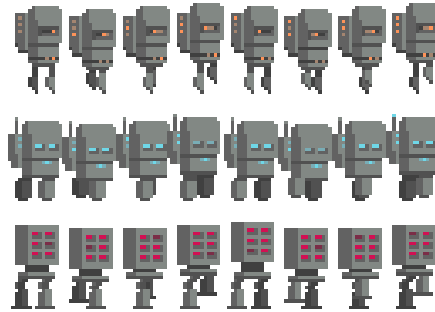 Dash sound effect
  And all Music regarding the store.

Specific Assets

Now that we have the list of required assets, for the ones you are not making yourself, start listing sources for the assets you would like to use.
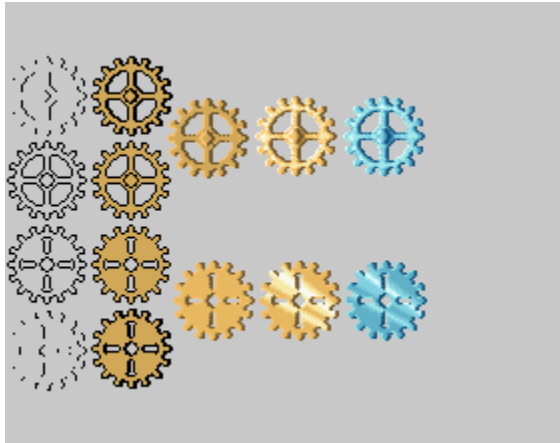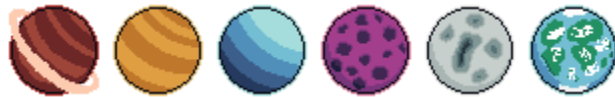
IDLE WALK

https://0x72.itch.io/16x16-robot-tileset

https://www.deviantart.com/lethargicpixel/art/Pixelart-Gear-Animation-634985916

https://pixel-by-pixel.itch.io/alcwilliam-space-ship-pack
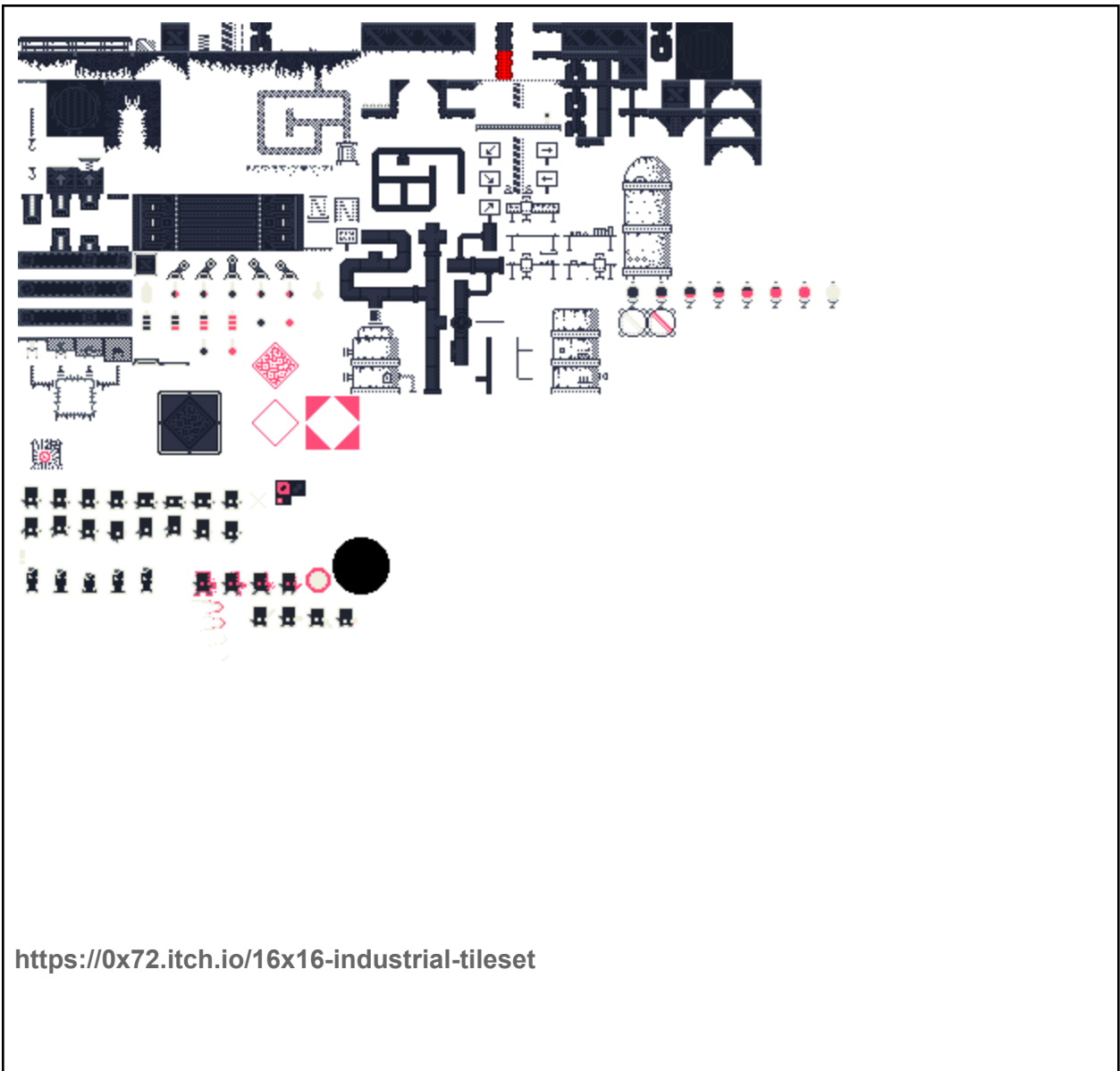

https://free-game-assets.itch.io/free-industrial-zone-tileset-pixel-art

Specific assets we ended up using:

https://safwyl.itch.io/oubliette-tileset

https://0x72.itch.io/16x16-industrial-tileset