Paul Godinez: Programming
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Implemented Mechanics

Feature 1: Enhanced Movement

1. Slime Dash
    a. The first mechanic we implemented was a dash. The dash ability is disabled by default, the player must grab a power up in order to unlock the dash. Picking up the powerup sets the maximum number of dashes and current number of dashes to 1. To dash, you must press the left shift button while also holding any of the following combinations of movement keys; A, A+W, A+S, D+S, D+W, D (left, up and left, down and left, down and right, up and right, right). The player will then dash in that same direction for a number of seconds equal to dashingDuration (default 0.3 seconds), and with speed equal to dashingPower (default 10 times moveSpeed). During the dash, gravity is disabled for the player. Using a dash subtracts 1 from the current number of dashes. Dashes recharge at a rate of one per (default 1.5) seconds up to the maximum. At the end of the dash, the player is once again affected by gravity. There is an additional upgrade available that when collected increases both maximum dashes and current dashes to 2.
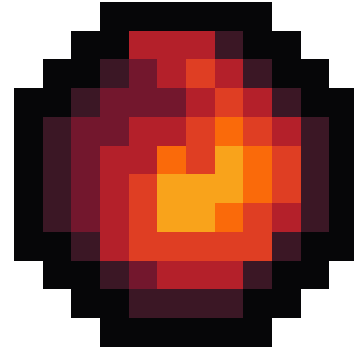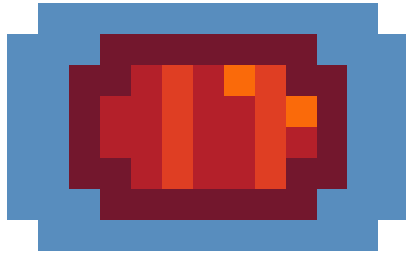   b. Powerup to unlock dash   Powerup to unlock double dash
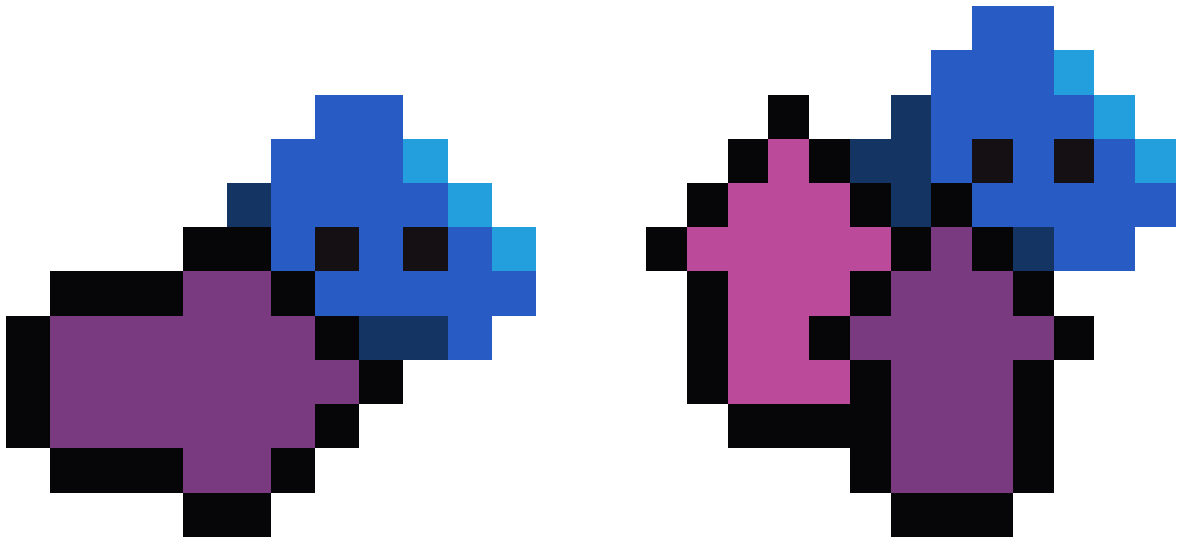
2. Barrel Jump
    a. The second mechanic we have implemented was barrel absorption/jumping. Same as dashing, there is a power up you have to grab in order to unlock the ability to pick up and use barrels. With the upgrade, the player stores a boolean indicating whether or not a barrel is being held. If the upgrade has been unlocked, when a barrel hits the player and no barrel is currently being held, the colliding barrel is destroyed and the holdingBarrel boolean is set to true. A UI icon representing a barrel will appear in the bottom left corner of the screen to indicate a held barrel. If a player is hit with a barrel while holding one, they are killed. Pressing C while the player is holding a barrel and is in the "grounded

state" (bottom half of the character colliding with the ground) will start a barrel jump. This is a vertical jump with (default 2) times the power of a regular jump. Using this ability "consumes" the held barrel, allowing the player to pick up another one.

 b. Power up to unlock barrel jump   Icon in bottom left of screen

3. Wall Climbing

 a. The last mechanic we have implemented is wall climbing. For now this is default behavior for the slime, but eventually we will add a power up to unlock this ability as well. Currently, the only climbable objects in the game are vertical walls (the only one in this build is in the test level). An object is considered a wall by its layer. If the player is colliding with a wall, you may hold L to activate climbing mode. In climbing mode, you may use the W and S keys to move up and down the wall. Eventually, this ability will be expanded to allow the slime to climb on ceilings.