



Constructing The Catacombs

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FourbitFriday



INDEPENDENT GAMES
SUMMIT

GAME DEVELOPERS CONFERENCE®

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Catacomb Kids

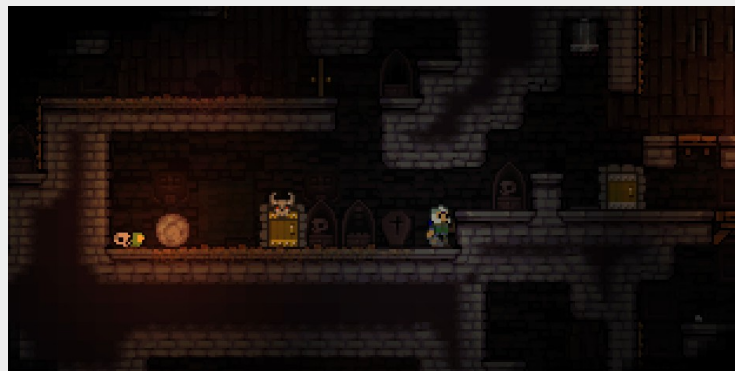
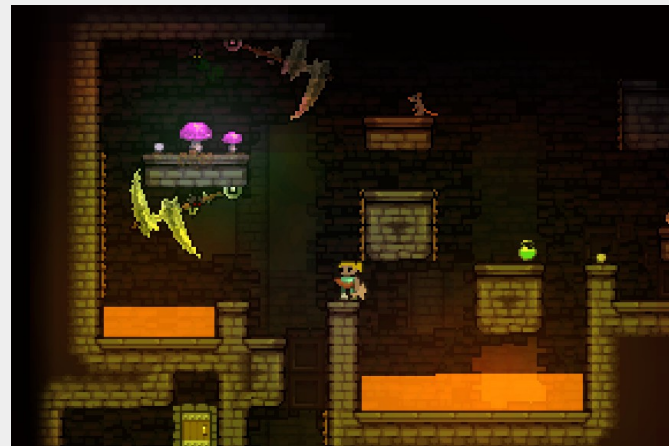
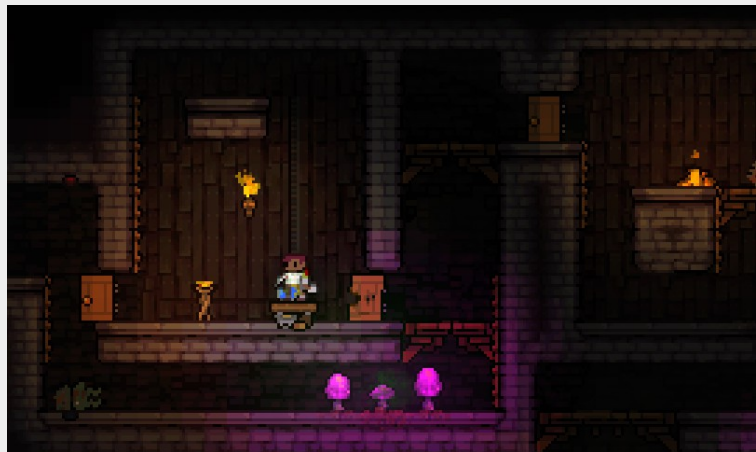
Procedurally Generated Dungeon-Crawling
Platformer

Permadeath



Catacomb Kids

Roguelike
Platformer





I Swear I'm Not A Spelunky Clone

- Omnidirectional
 -
- Indestructible
 -
- Deeply Procedural
 -



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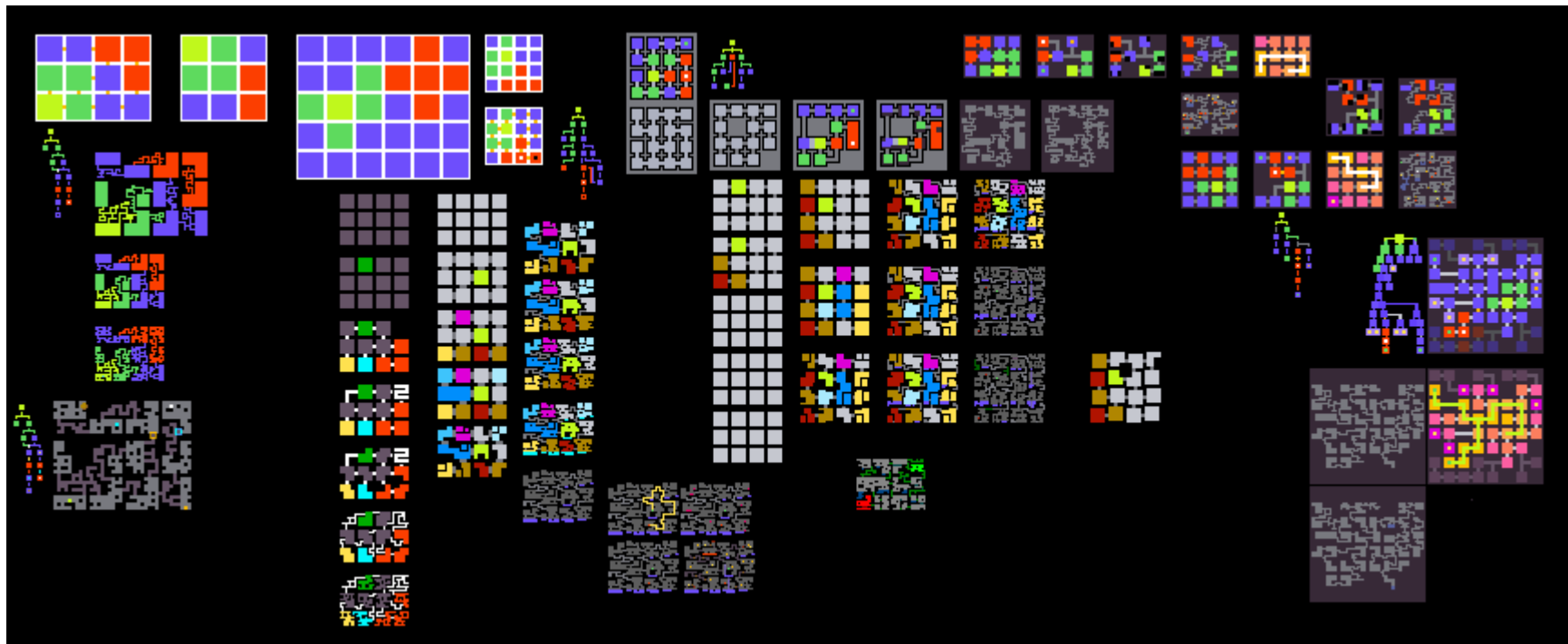


I Swear I'm Not A Spelunky Clone

- Omnidirectional
 - Exploration is Mandatory
- Indestructible
 - Deal With The Obstacles
- Deeply Procedural
 - Unpredictability + Minimal Input

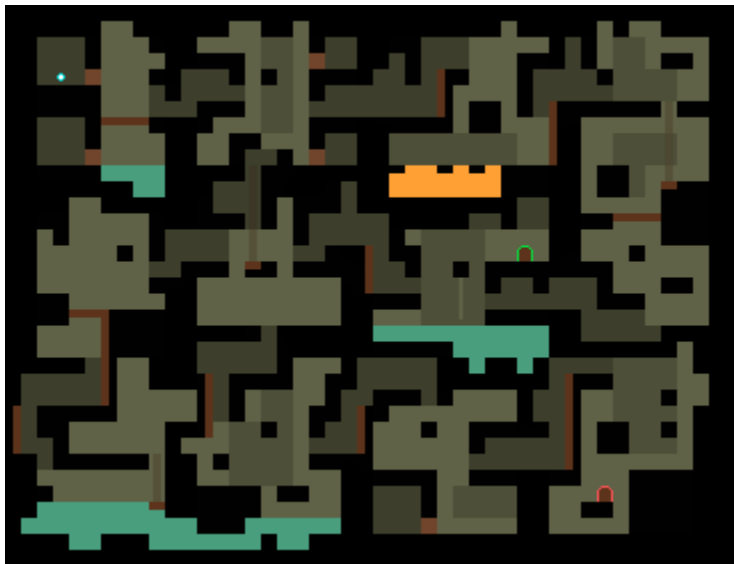


•The Mockups





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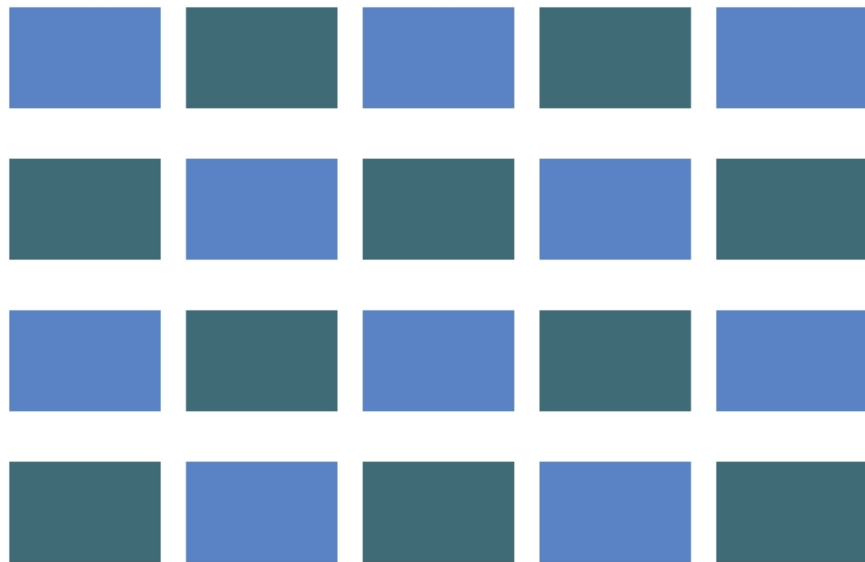


The Floor

1. Room Grid

- Base Room Size
- Room Spacing
- Floor Dimensions

H. Rooms × V. Rooms





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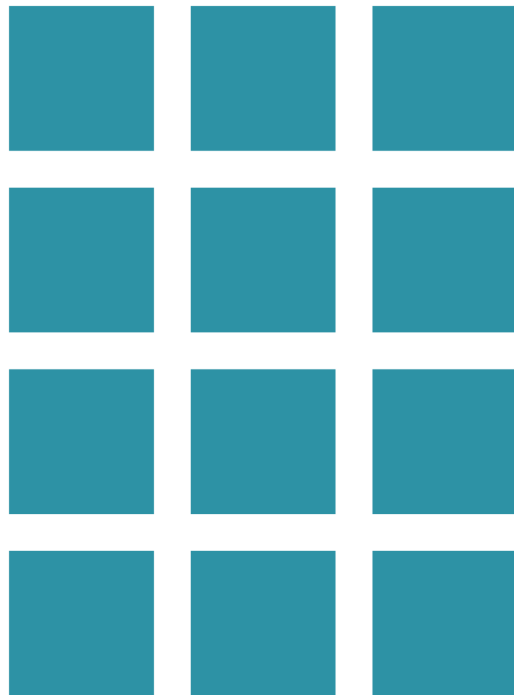


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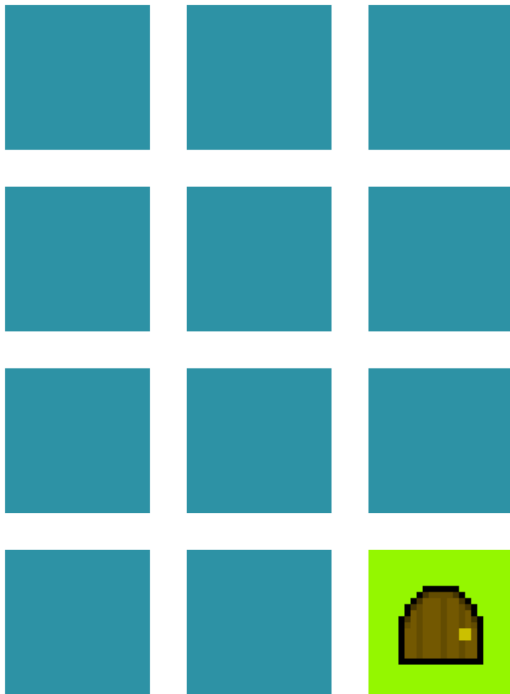




The Floor

2. Level Flow

- Choose Start Room
- Spread Connections
- Mark Pre-Made
- Mark Finish + Orb

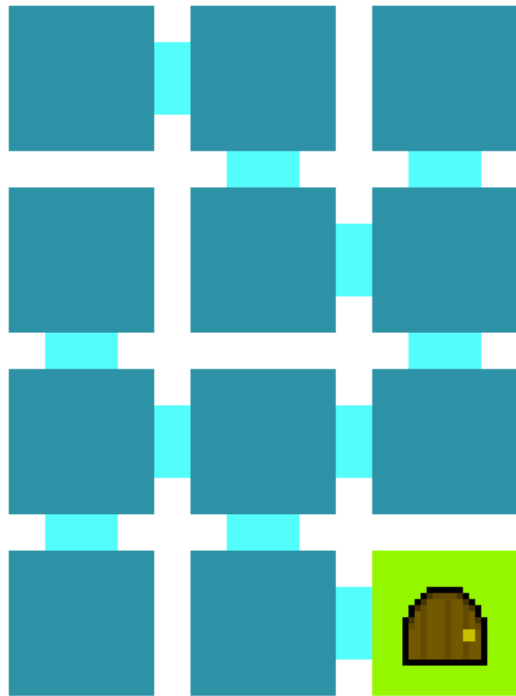




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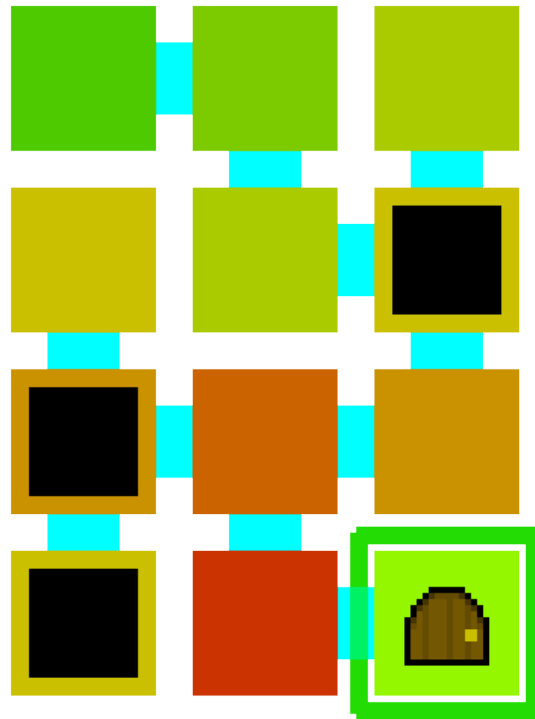




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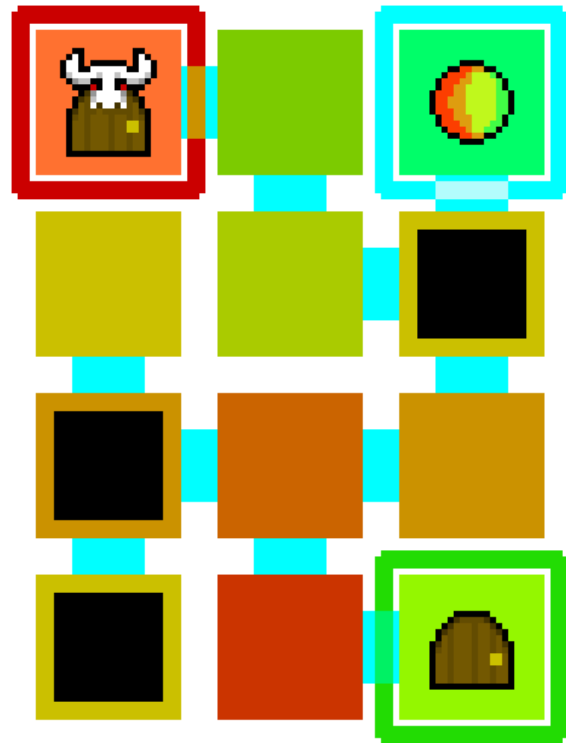




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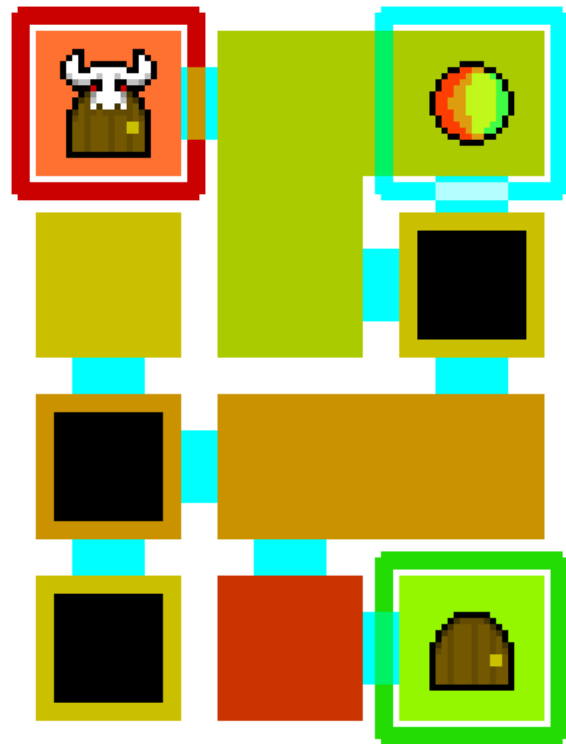




The Floor

3. Shift Layout

- Combine “Large Rooms”
- Add Loops
- Shift Rooms Off Of The Grid

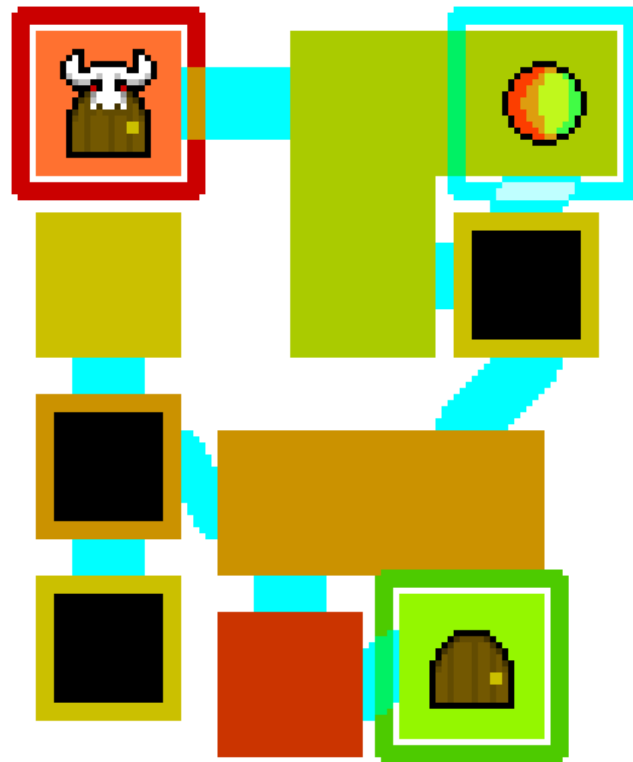




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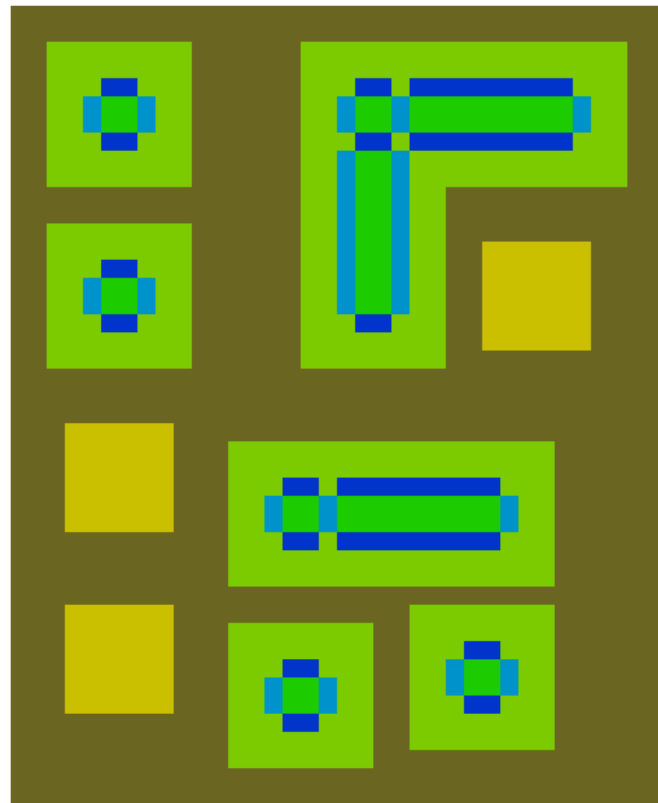




The Rooms

4. Connections

- Locate Potential Room Exits
- Pepper Space With Pathing Obstacles
- Create Paths (A^*)

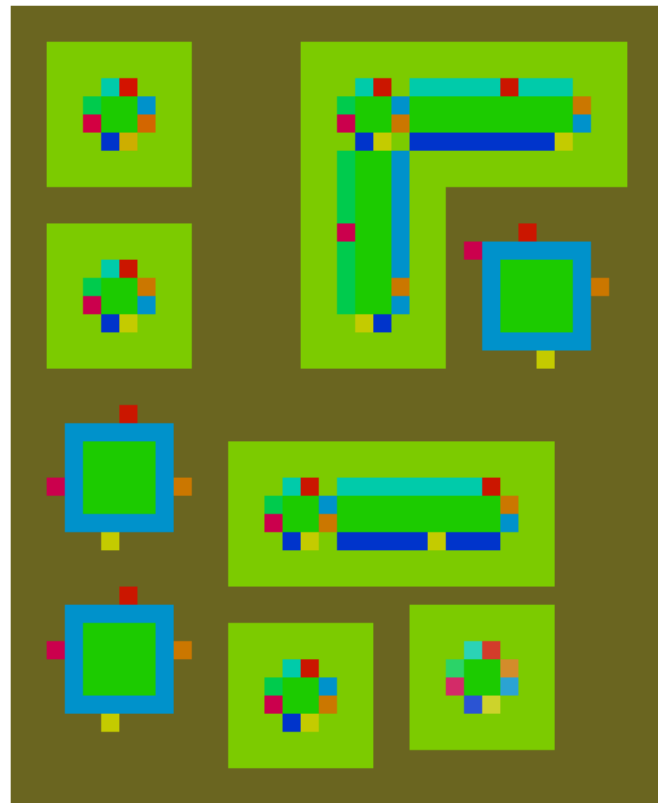




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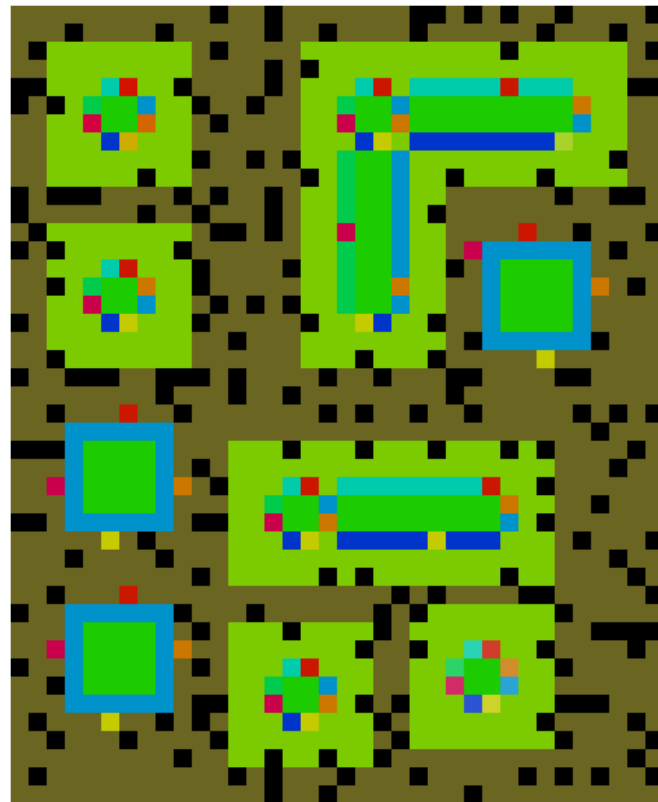




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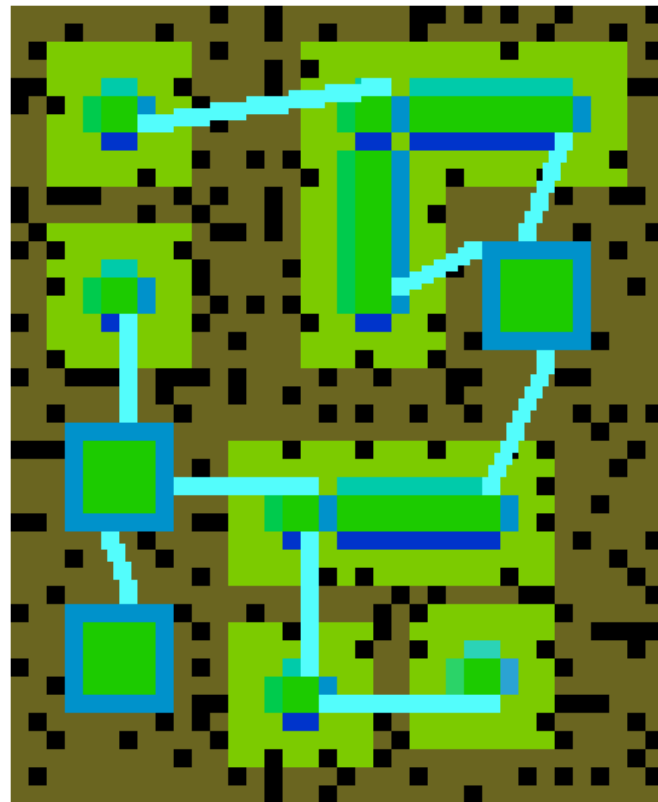




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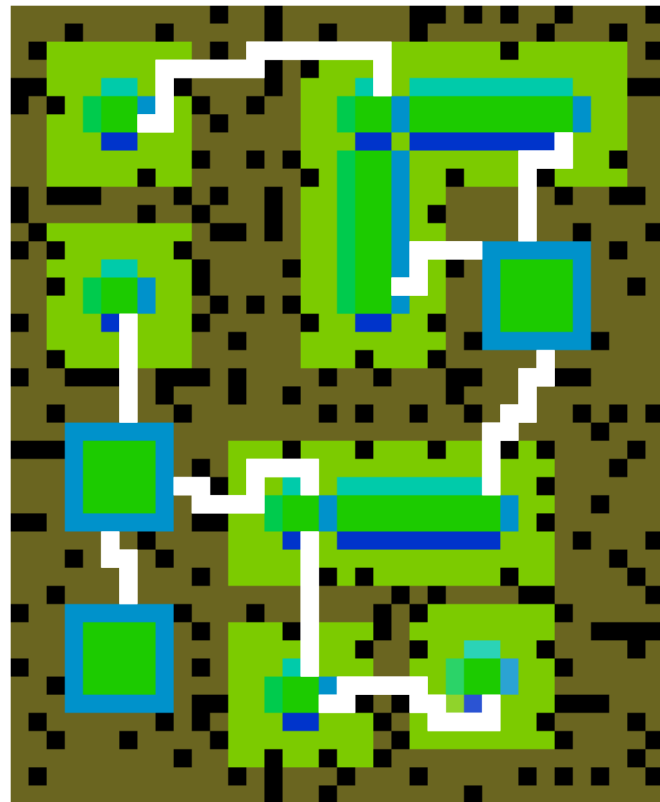




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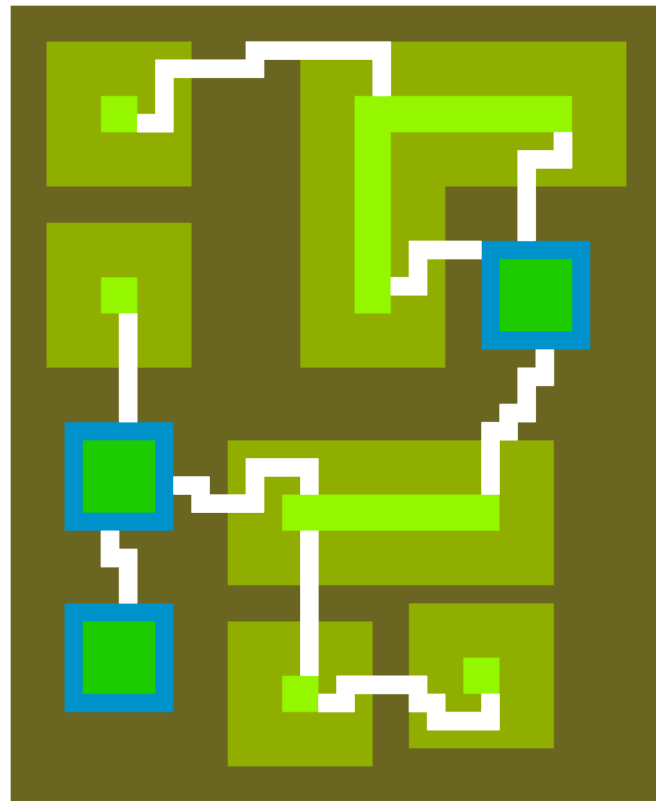




The Rooms

5. Spread

- Find Room “Cores”
- Spread to Size
- Spread Beyond Size
(If Applicable)
- Make Tunnels Taller

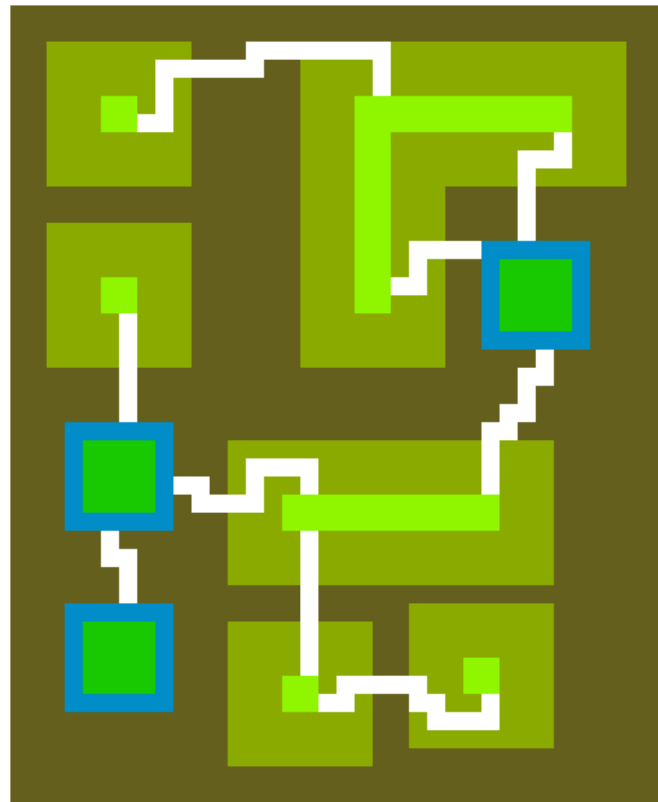




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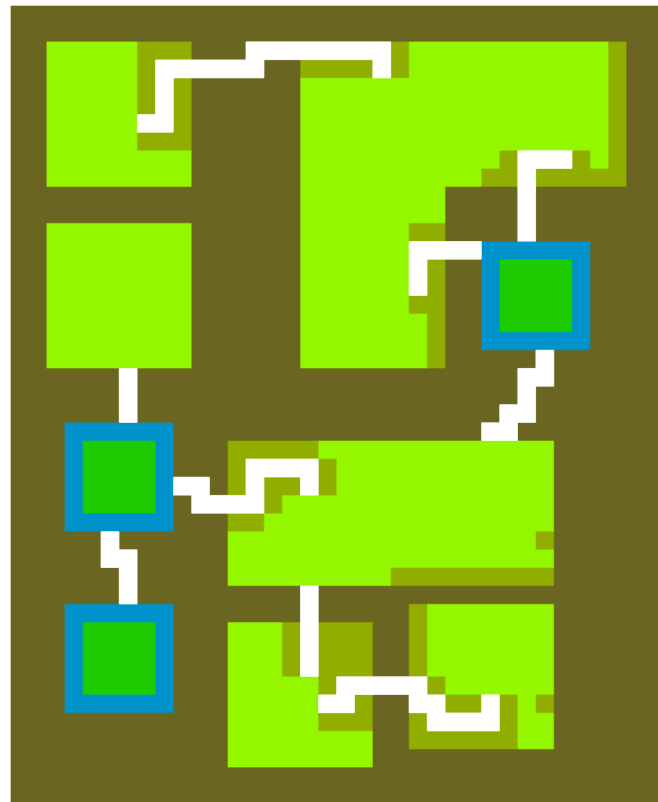




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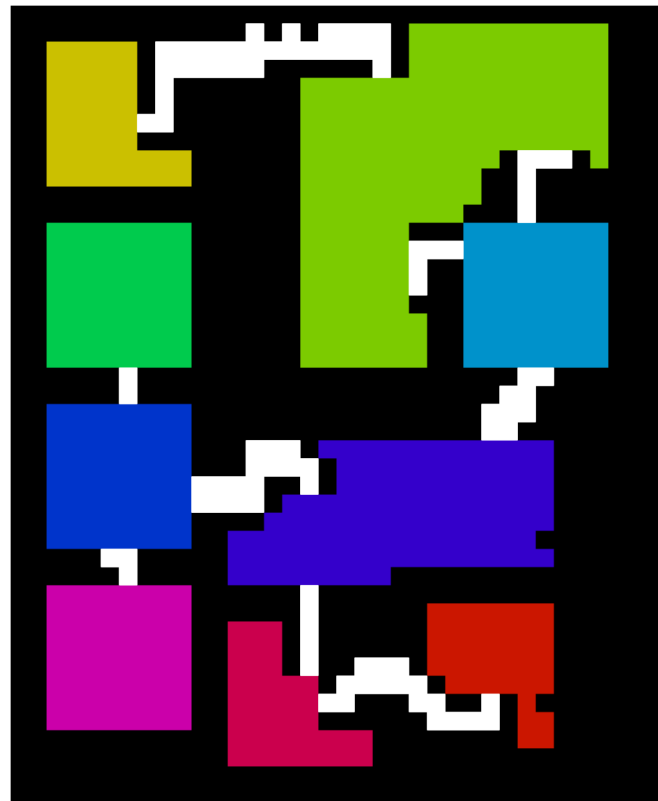




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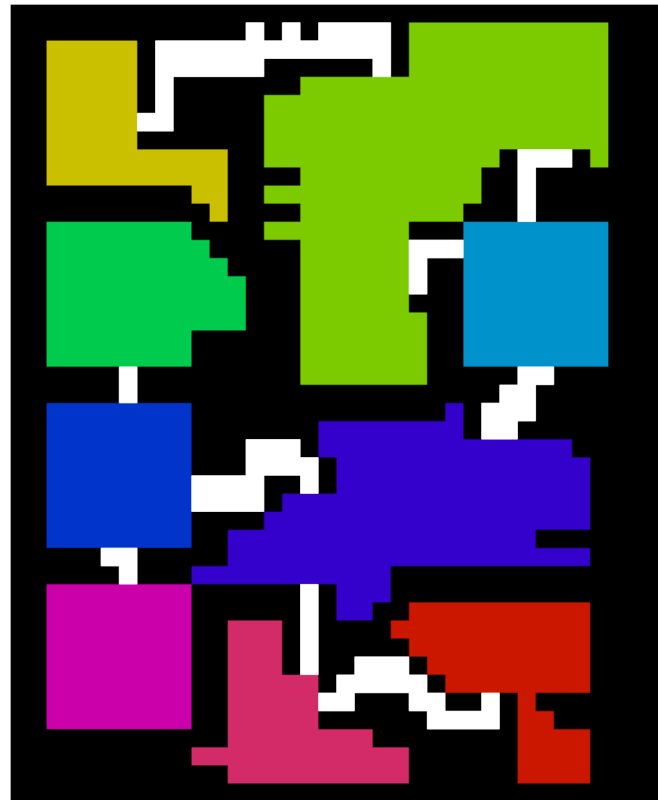




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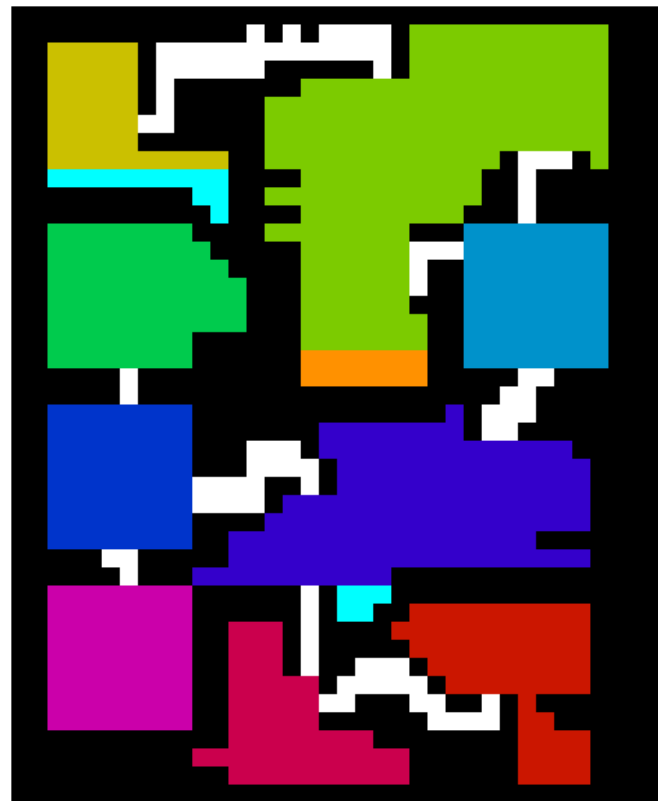




The Rooms

5. Complexity

- Define Water+Lava Regions
- Add Sub-structures Within Rooms





Divisions (The Rooms)

Division Types

- Block
- Horizontal Wall
- Vertical Wall
- Sub-Rooms





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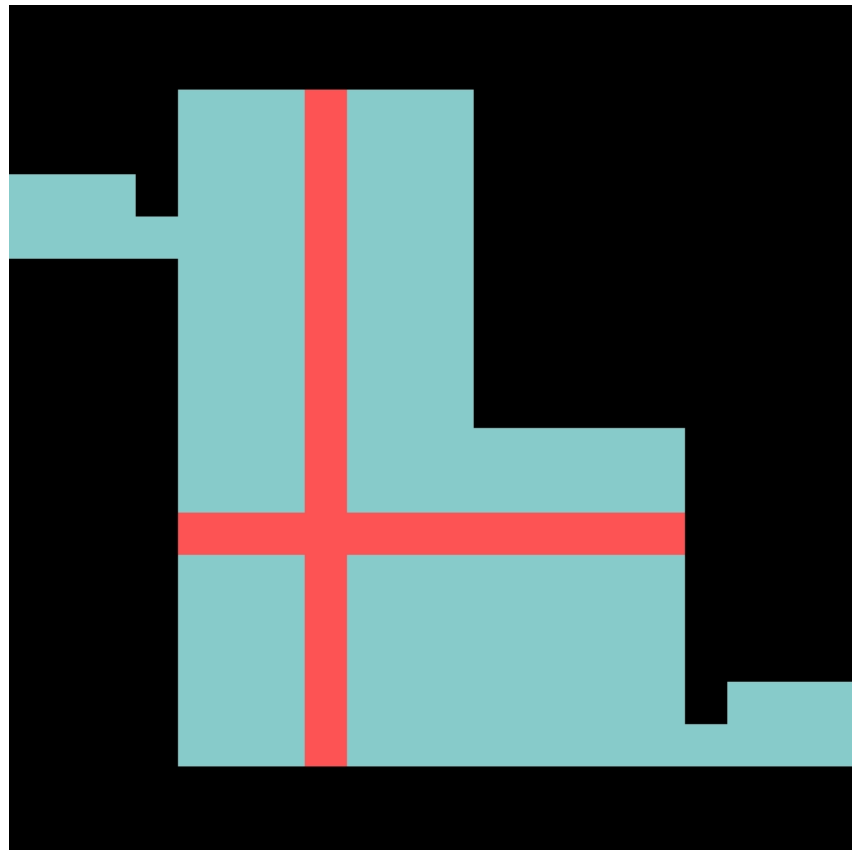




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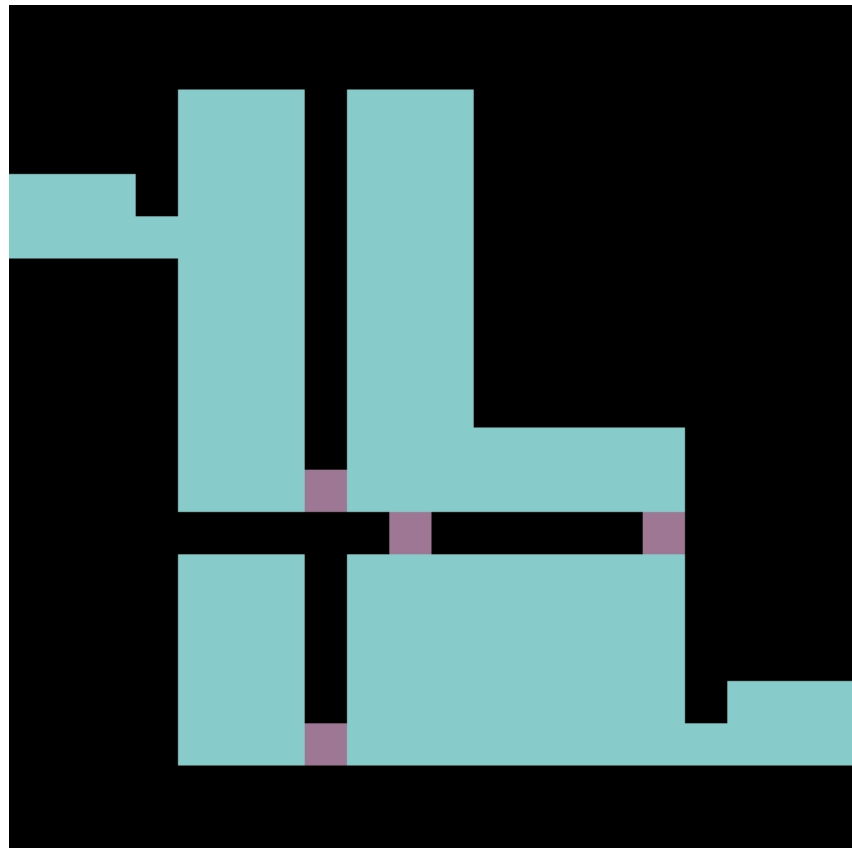




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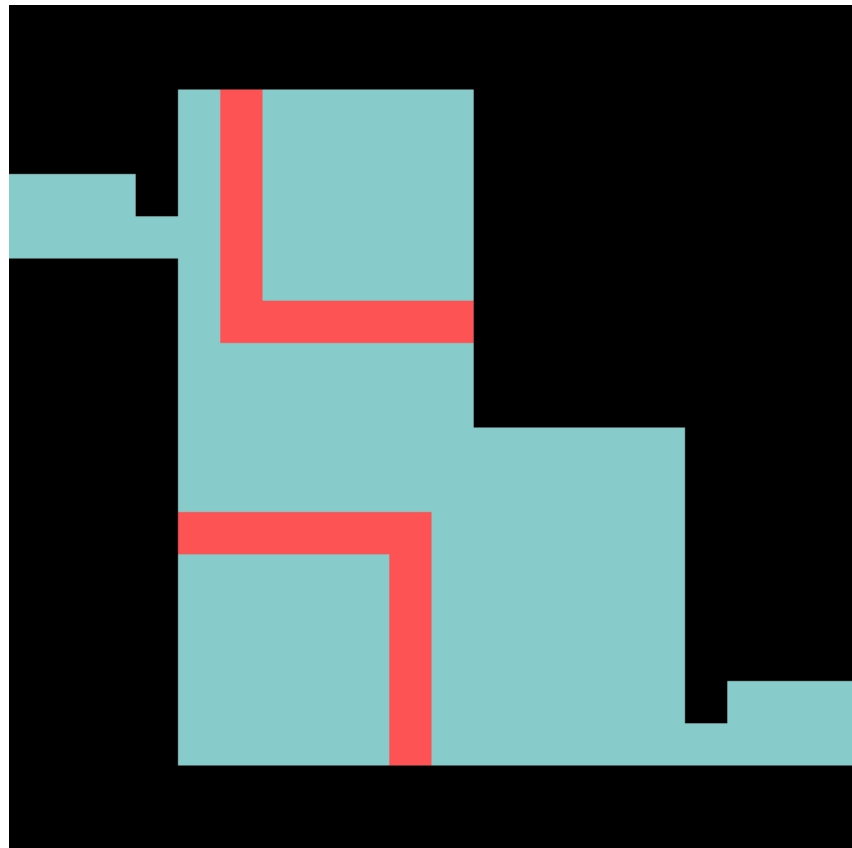




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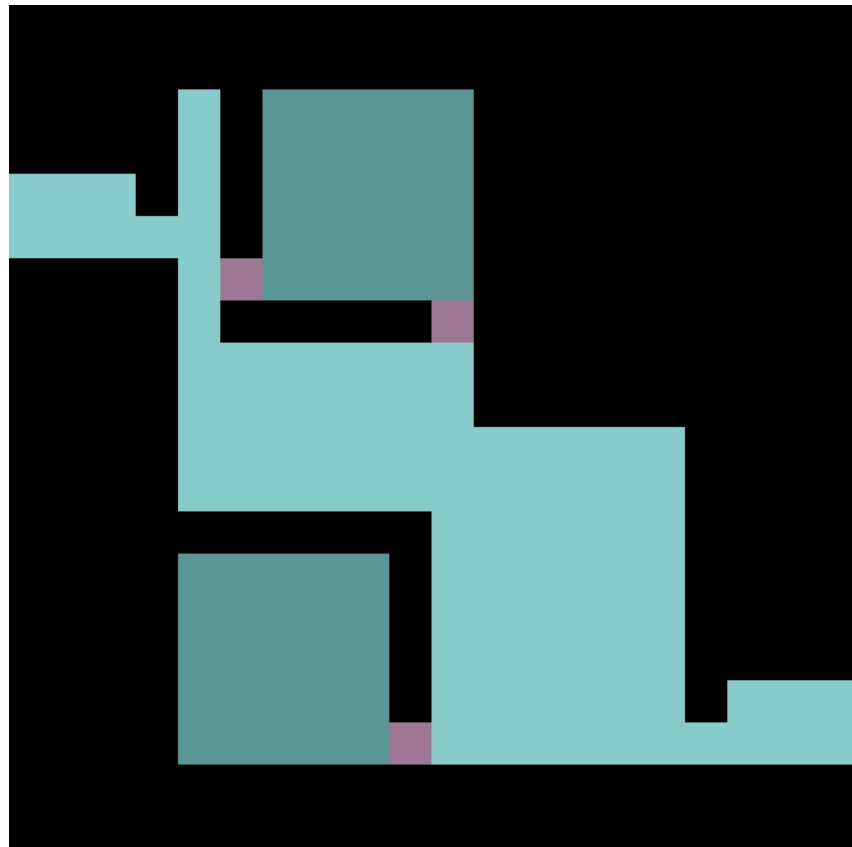




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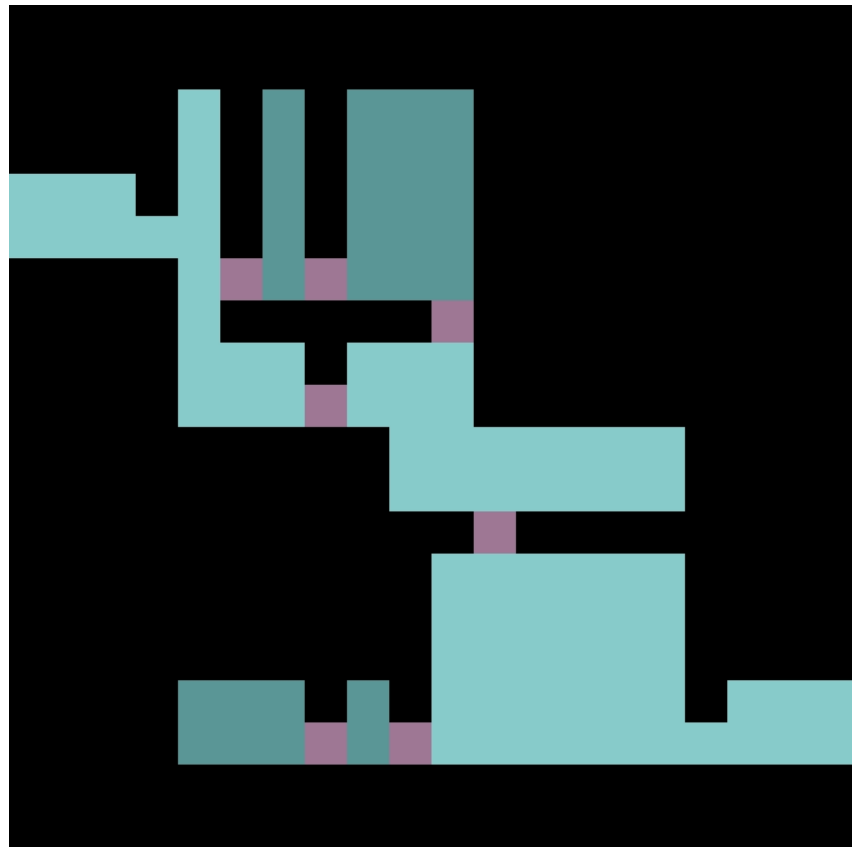




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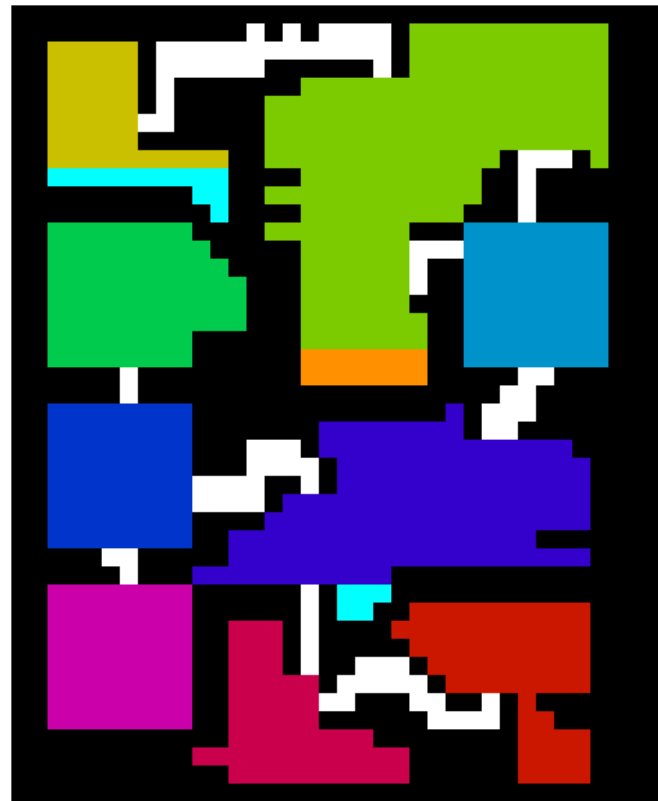




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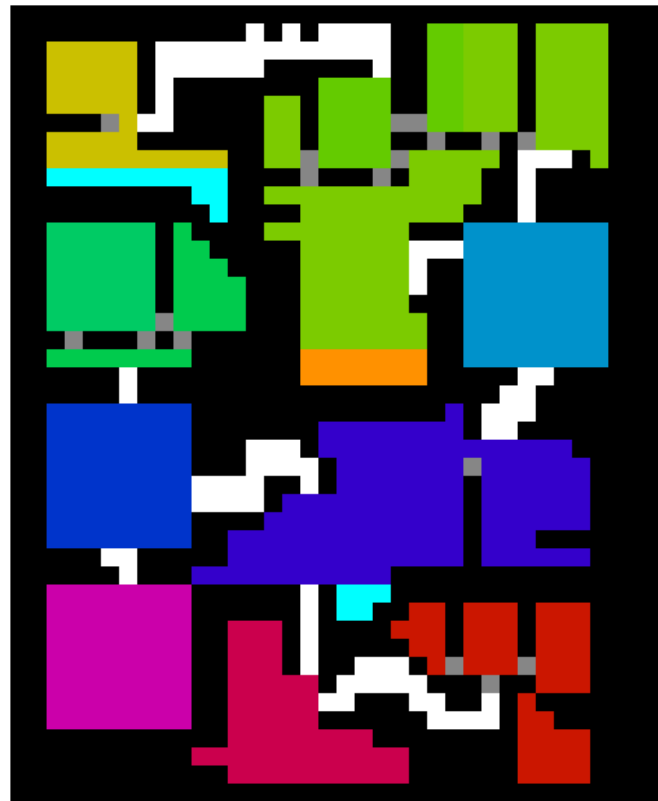




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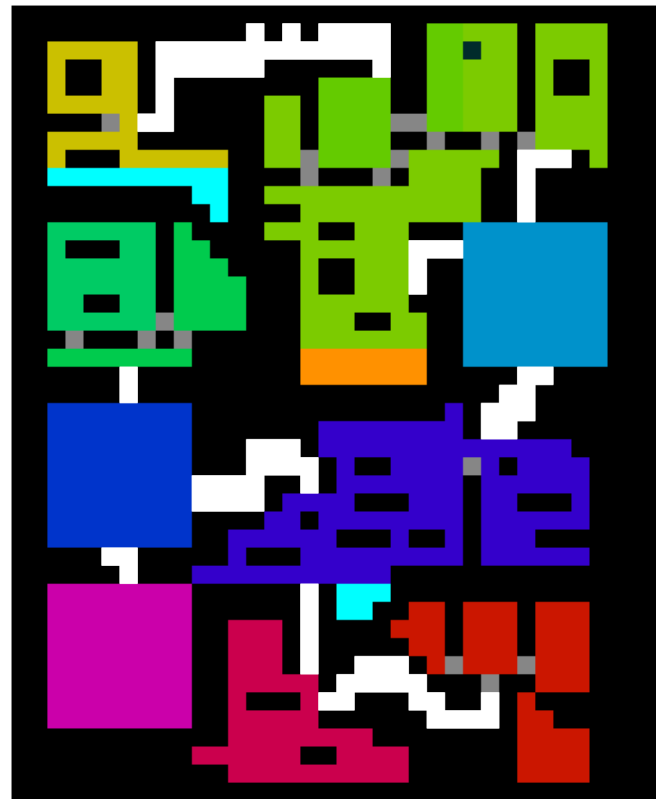




The Rooms

6. Finishing

- Platforms
- Apply Premade Rooms
- Flood-Fill Check

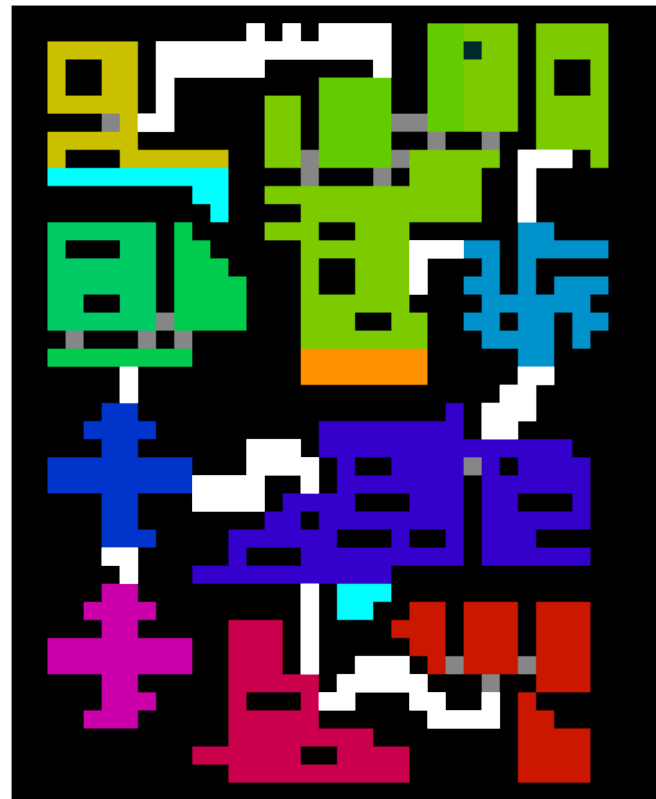




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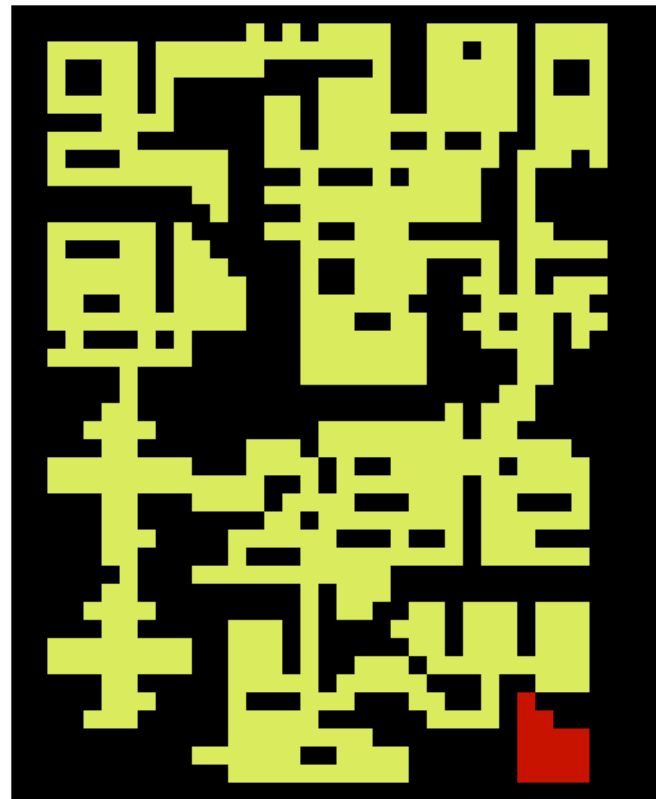




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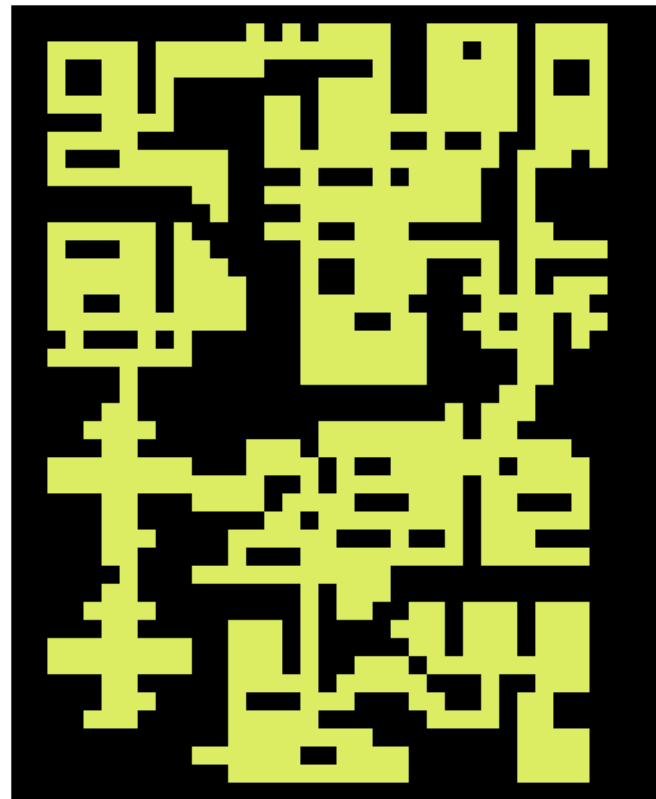




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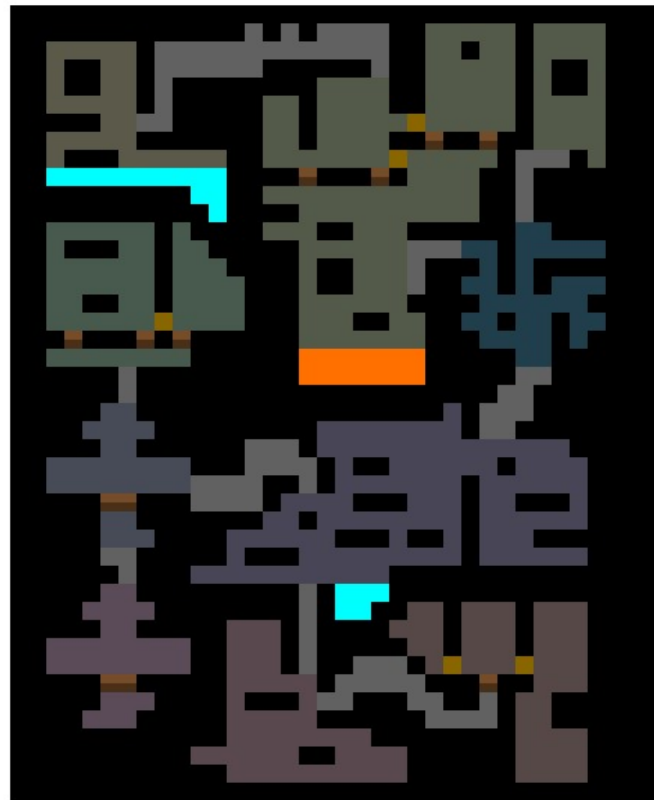




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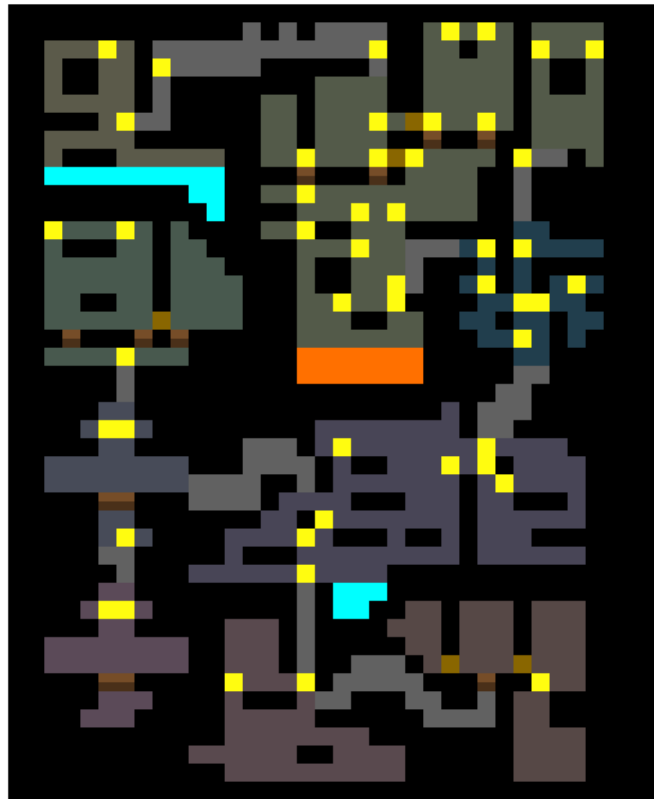




The Content

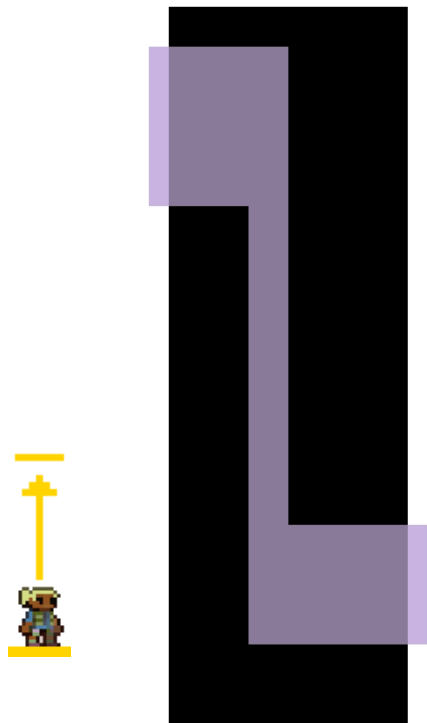
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- Mark Dropoffs
- Ladders
- Elevators



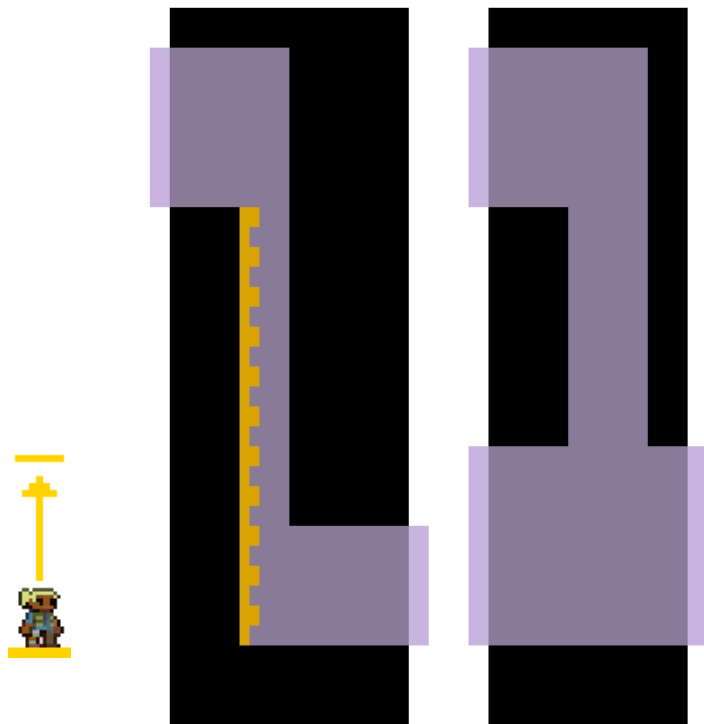


Upwards Mobility



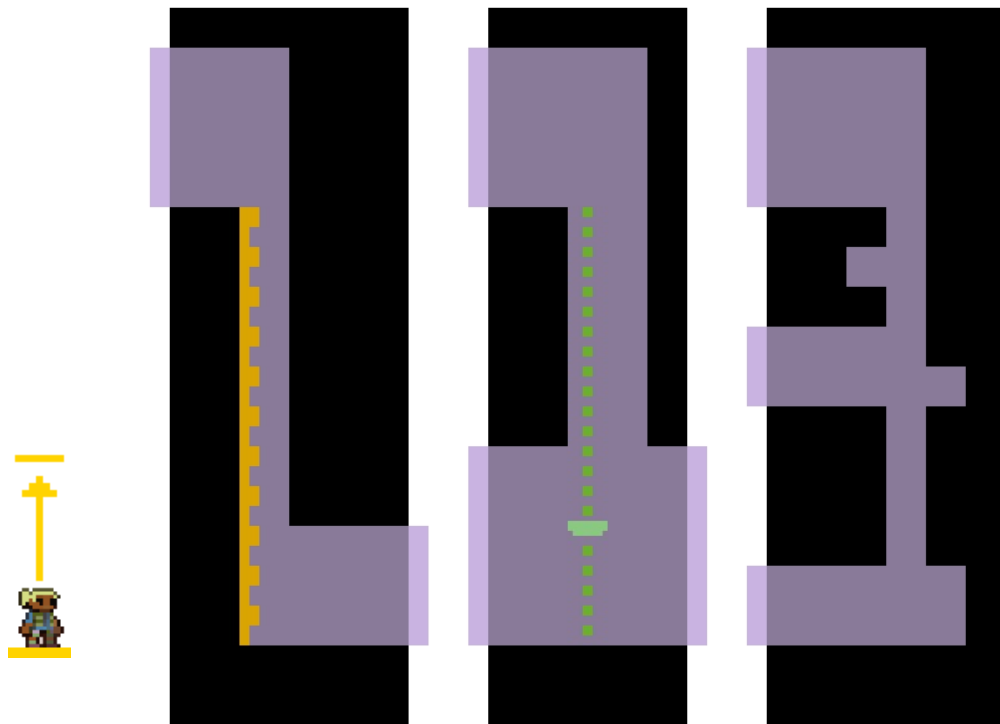


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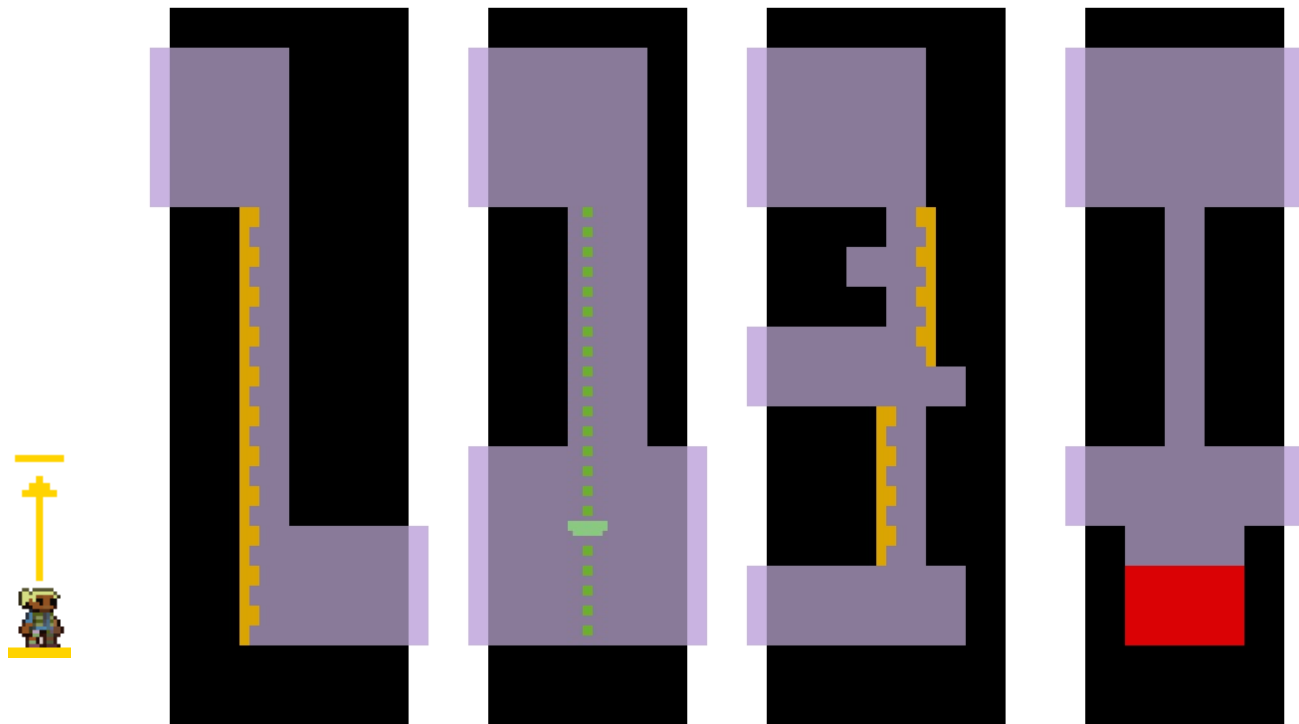


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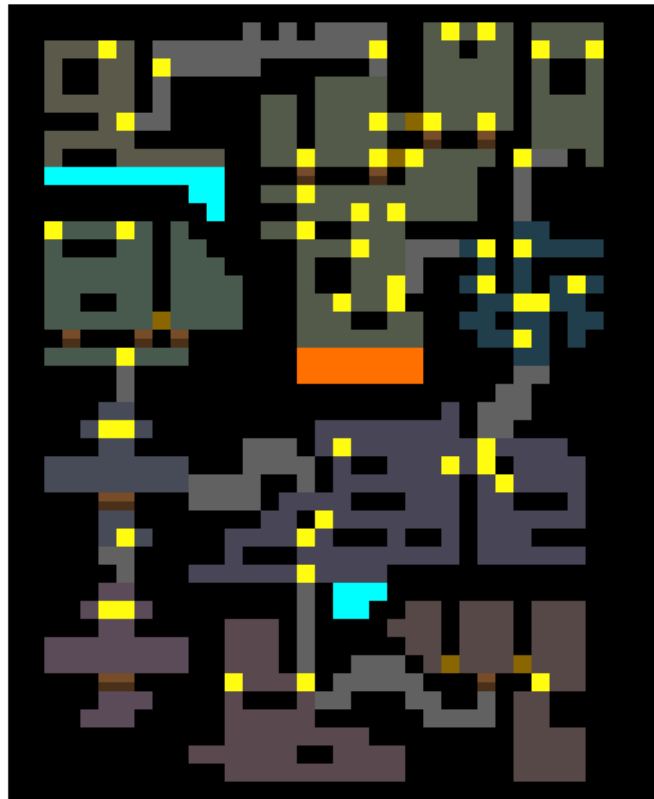




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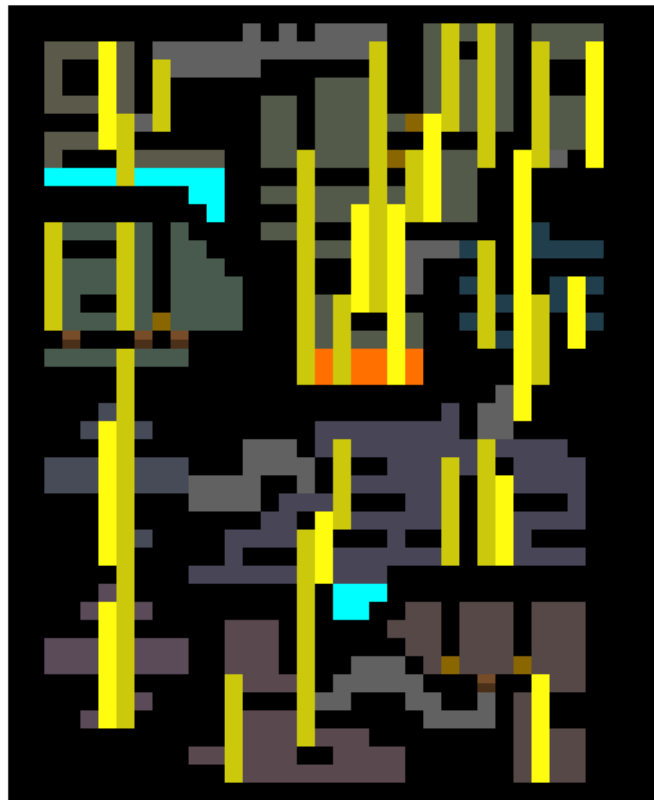




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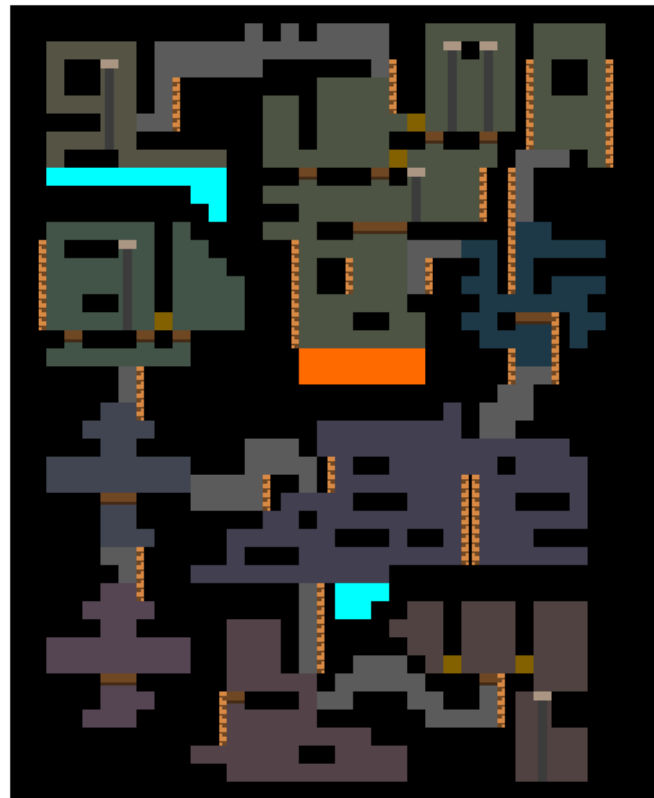




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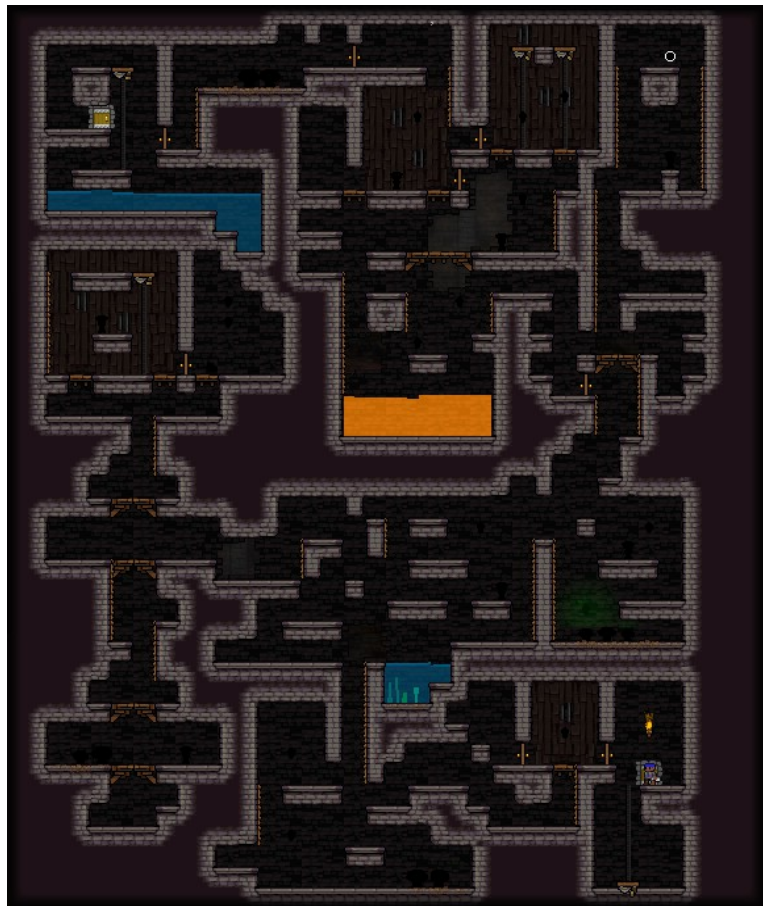




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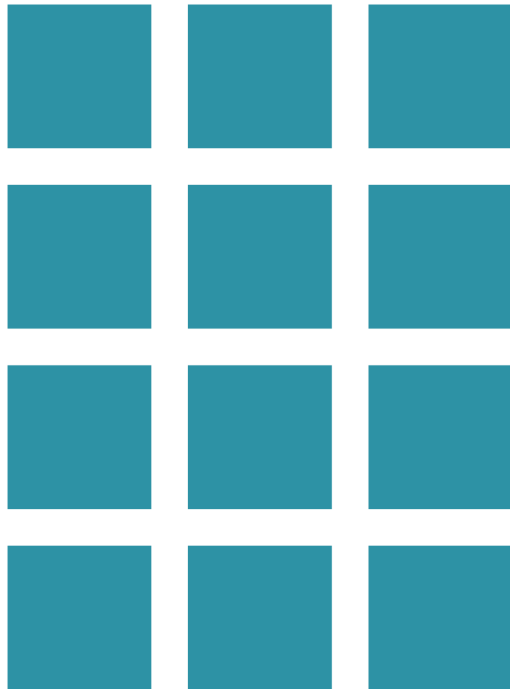




The Story So Far...

Review

- Grid of Rooms
- Combine and Offset
- Connect via Tunnels
- Expand Rooms
- Sub-Structures and Platforms
- Upwards Mobility

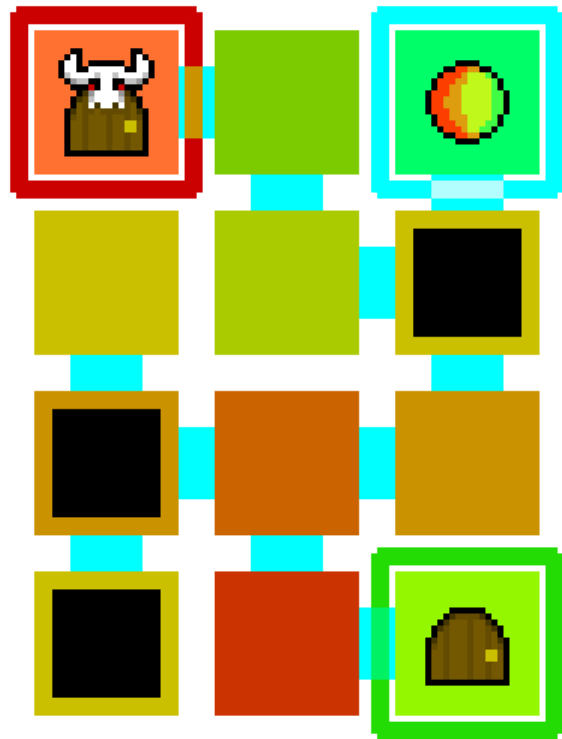




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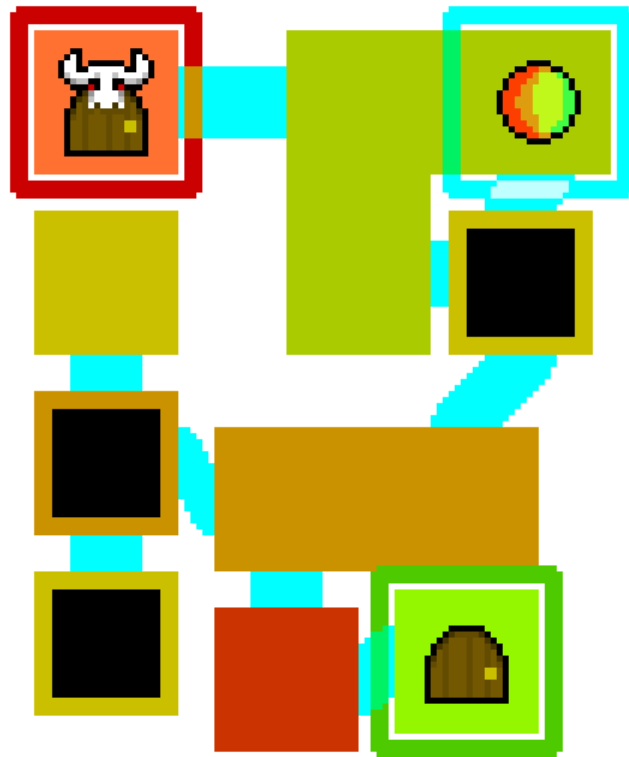




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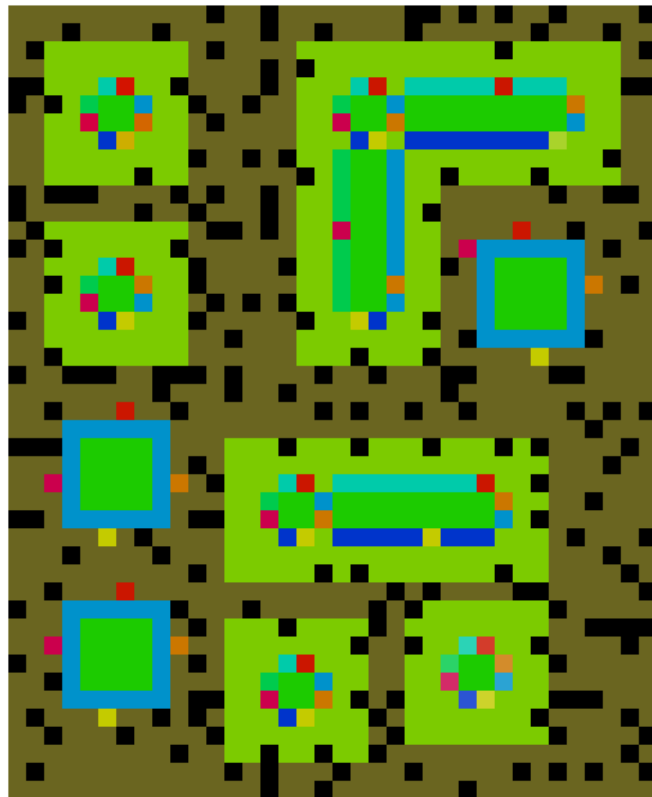




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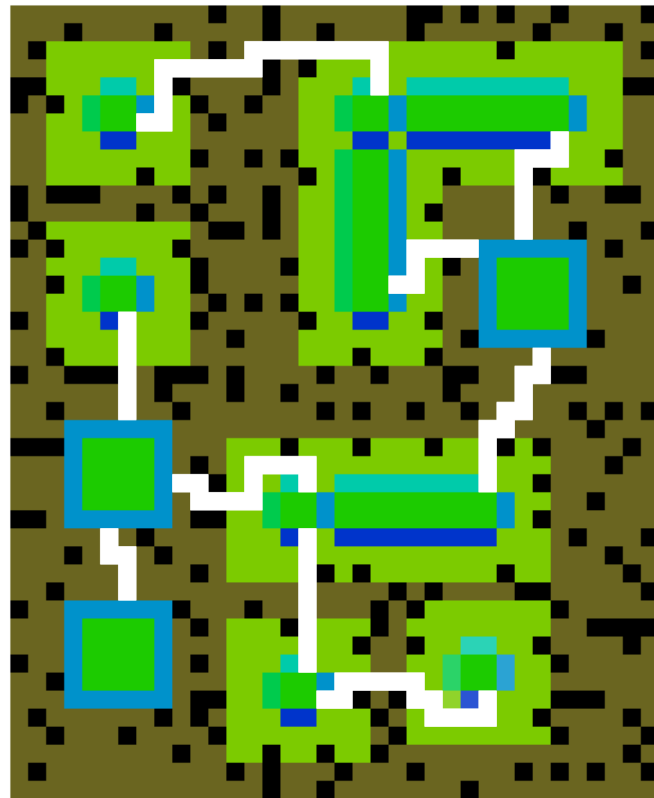




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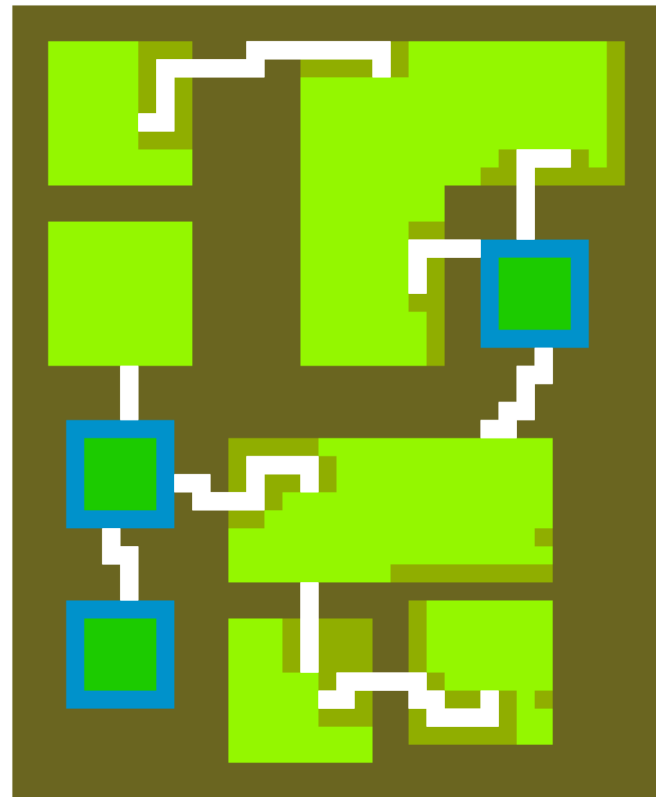




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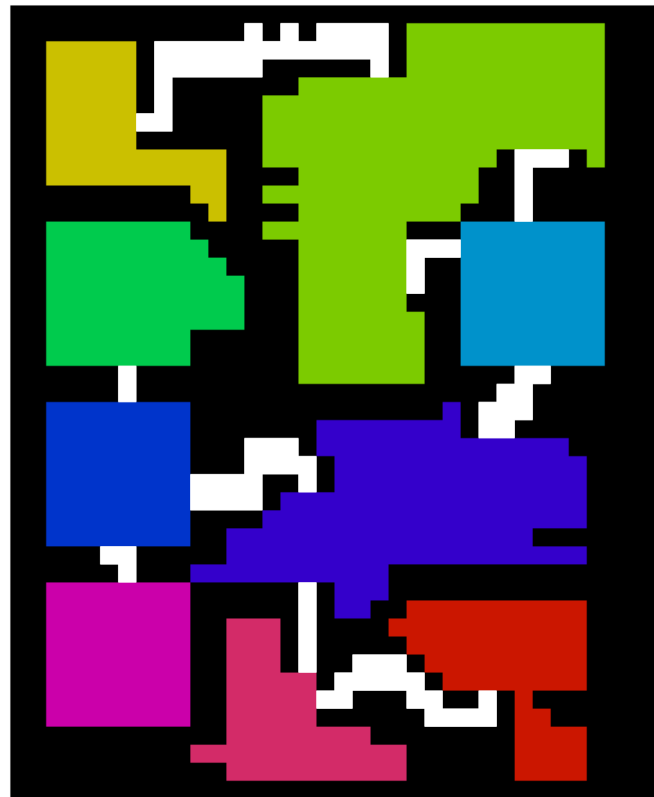




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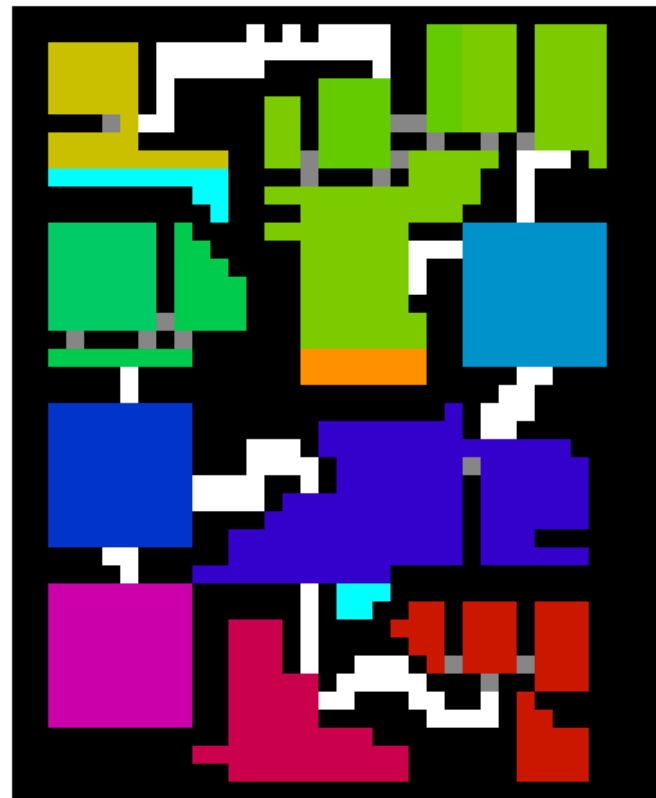




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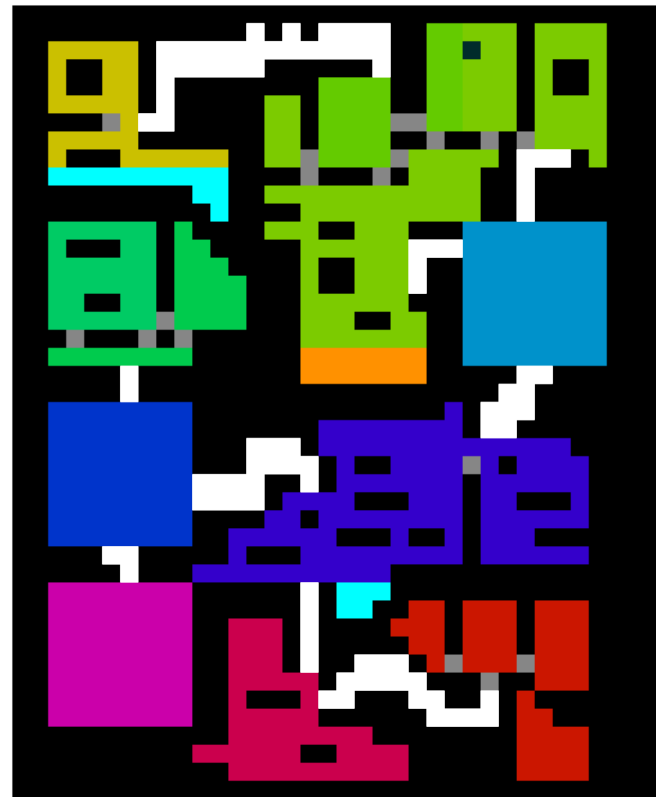




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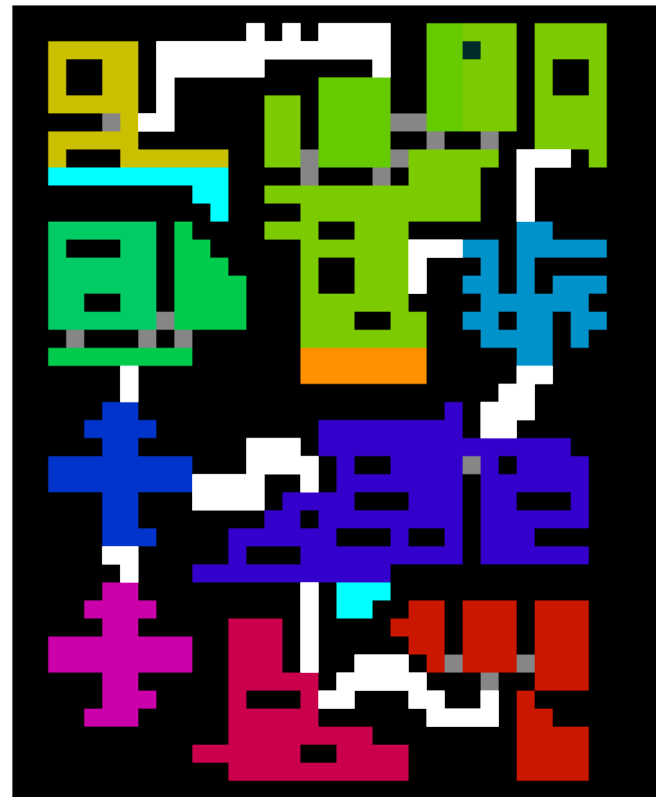




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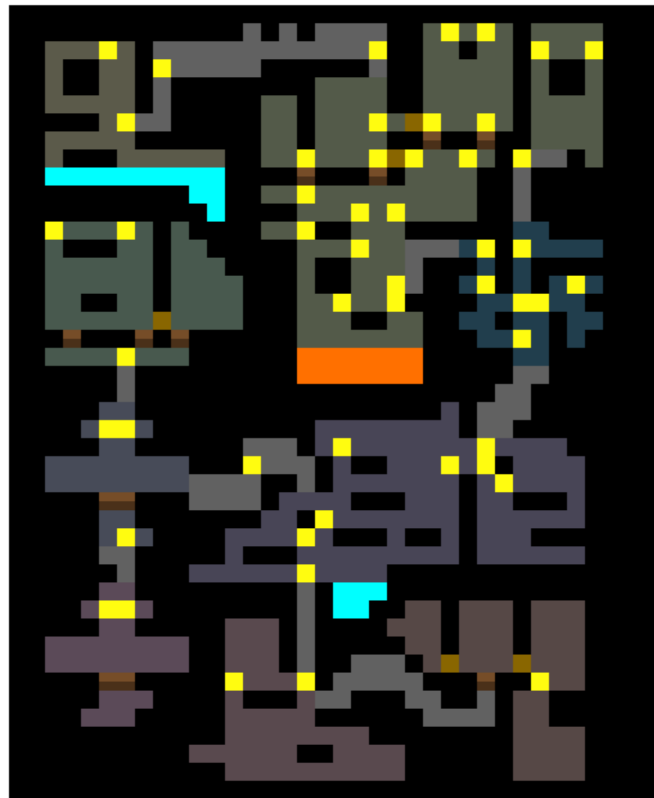




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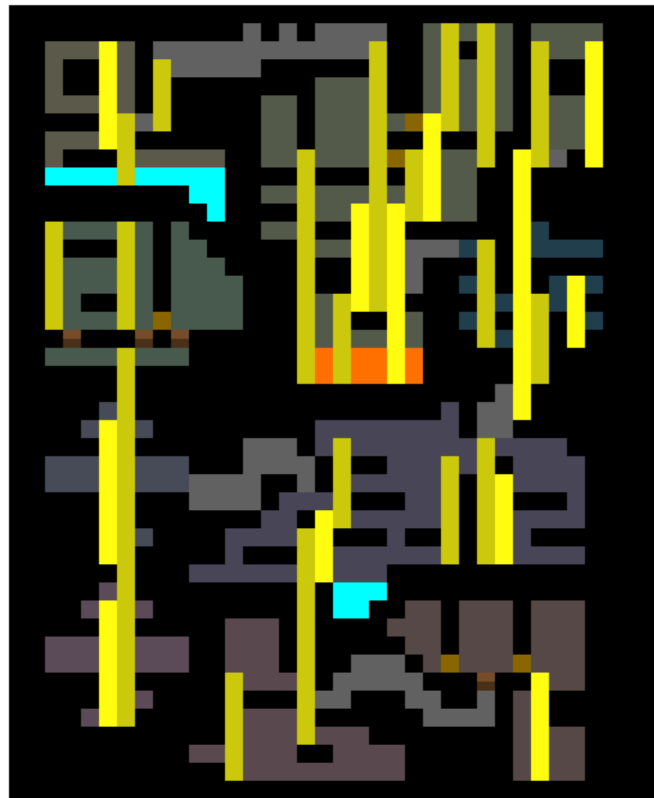




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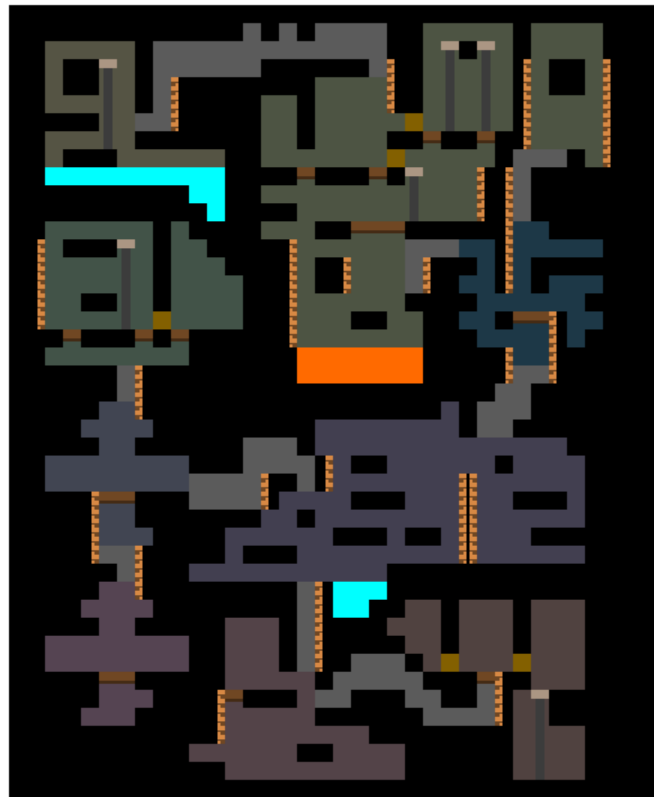




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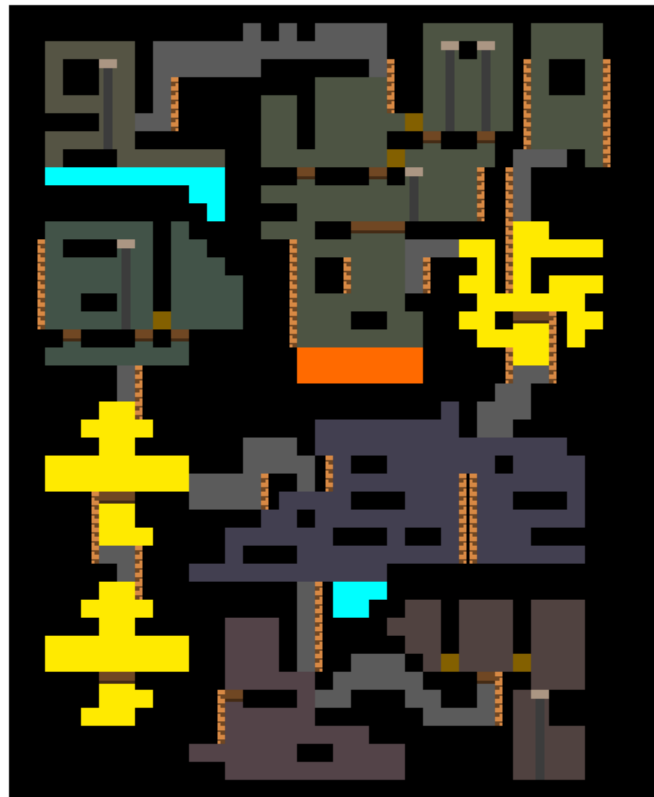




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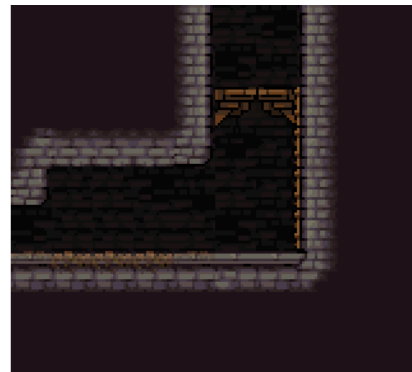
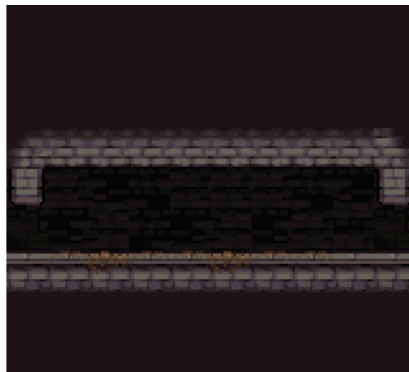
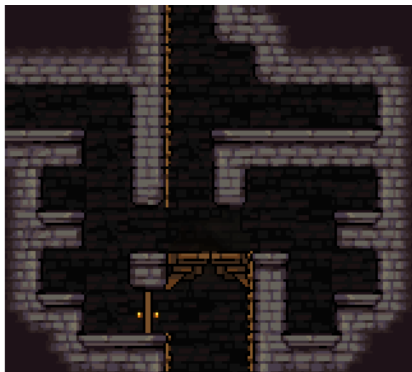
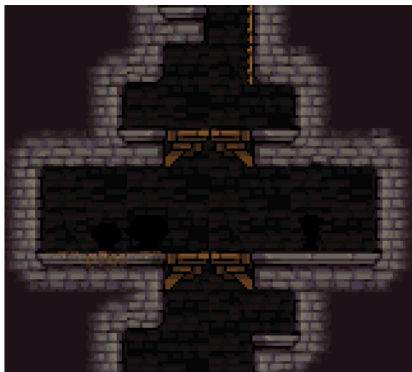




The Touch

8. Premade Rooms

- Surprisingly Plain
- Anonymity through Simplicity
- Familiarity
- Challenges and Rewards





The Quirks

- Circuitous Tunneling
- Teleporters
- Stupid Lava
- Turning Issues Into Features





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Final Thoughts

- Make Mockups
- Positive and Negative Interest-Space
- Include “Interestingness” In The Cost Of Fixing Things



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