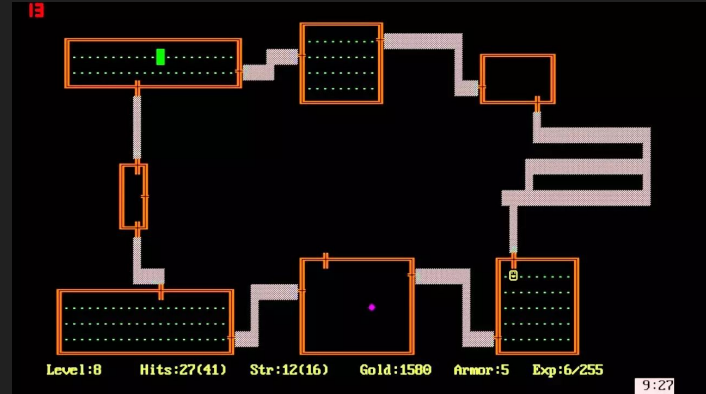# Tomb Escape

GROUP 7: Asad | Dolphin | Roger | Brandon

Week 4: Procedural Content Generation

Inspiration

- Roguelike Dungeon Game

Game Mechanics

Exploration Step:

- Explore the tomb
- Experience various challenges and collect abilities that can be positive or negative
  - Torch, treasure box, password puzzle, enemies, etc
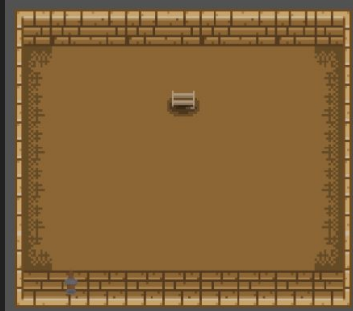- Try your best to remember the path

Escape Step:

- Once you find the artifact, you have to escape the tomb
- Running back to the room where you start
- Don't let the boss catch you
- Use different abilities you have obtained during exploration. The more positive actions during your exploration, the better prepared you are to escape

Procedural Content Generation

- Graph-based PCG Dungeon Generation Algorithm
  - Each [Room] is represented as a [Node]
  - Each [Corridor] is represented as a [Edge]
  - The whole generation operates on a [Graph] data structure
- Algorithm will
  - Randomly select one node, instantiate a room prefab
  - Try create the edge of it's possible door position
  - Connect it to another node
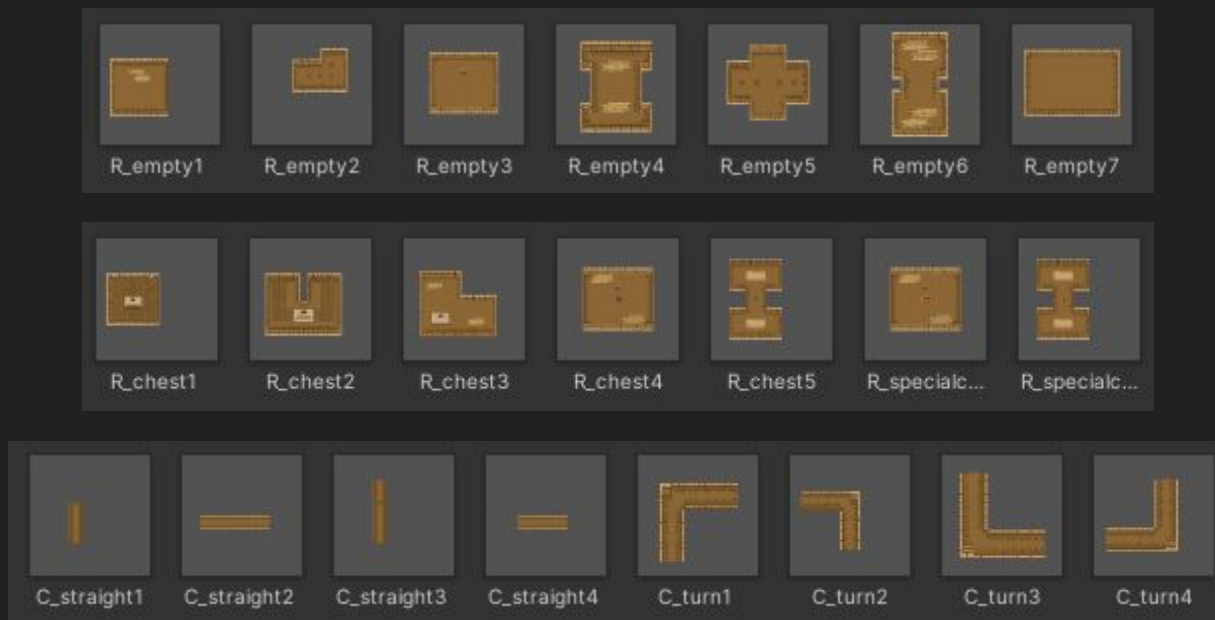 - Loop to find an acceptable result
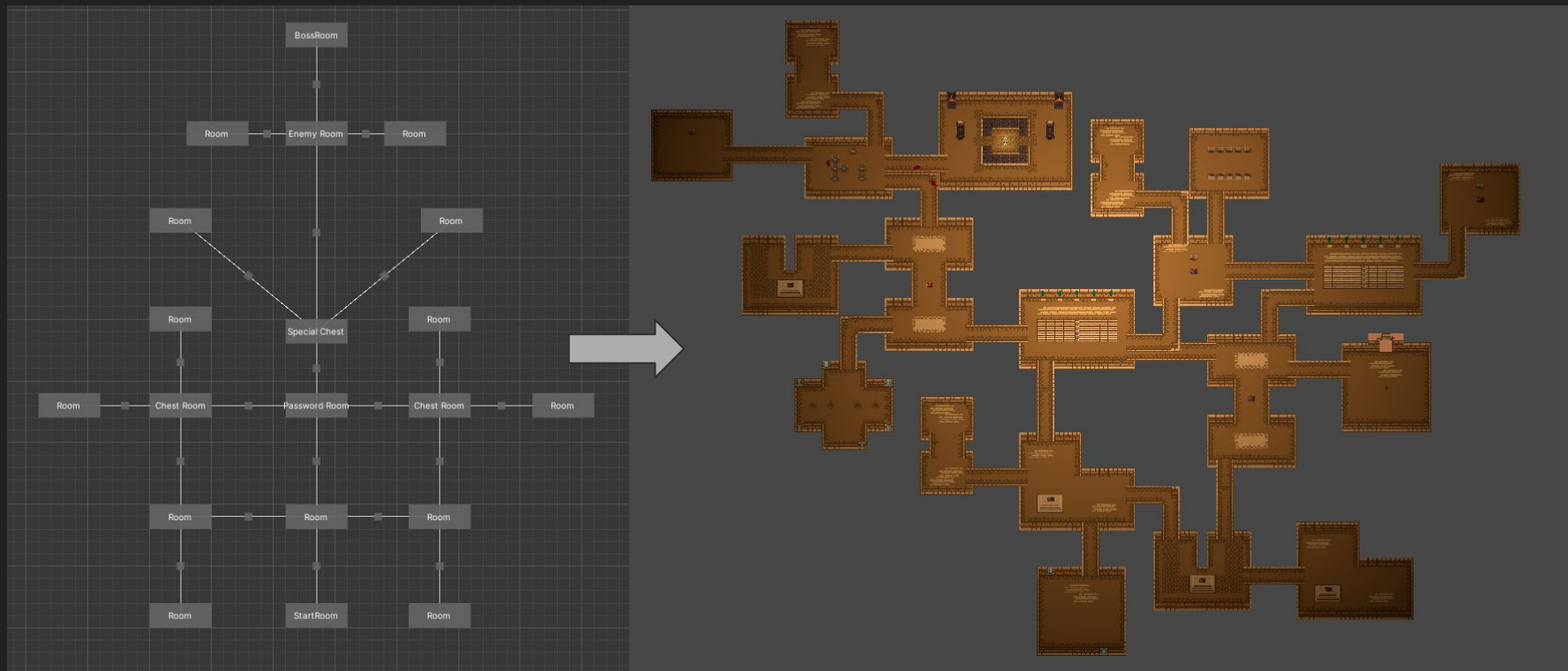
Room

Corridor

Room and Corridor Template
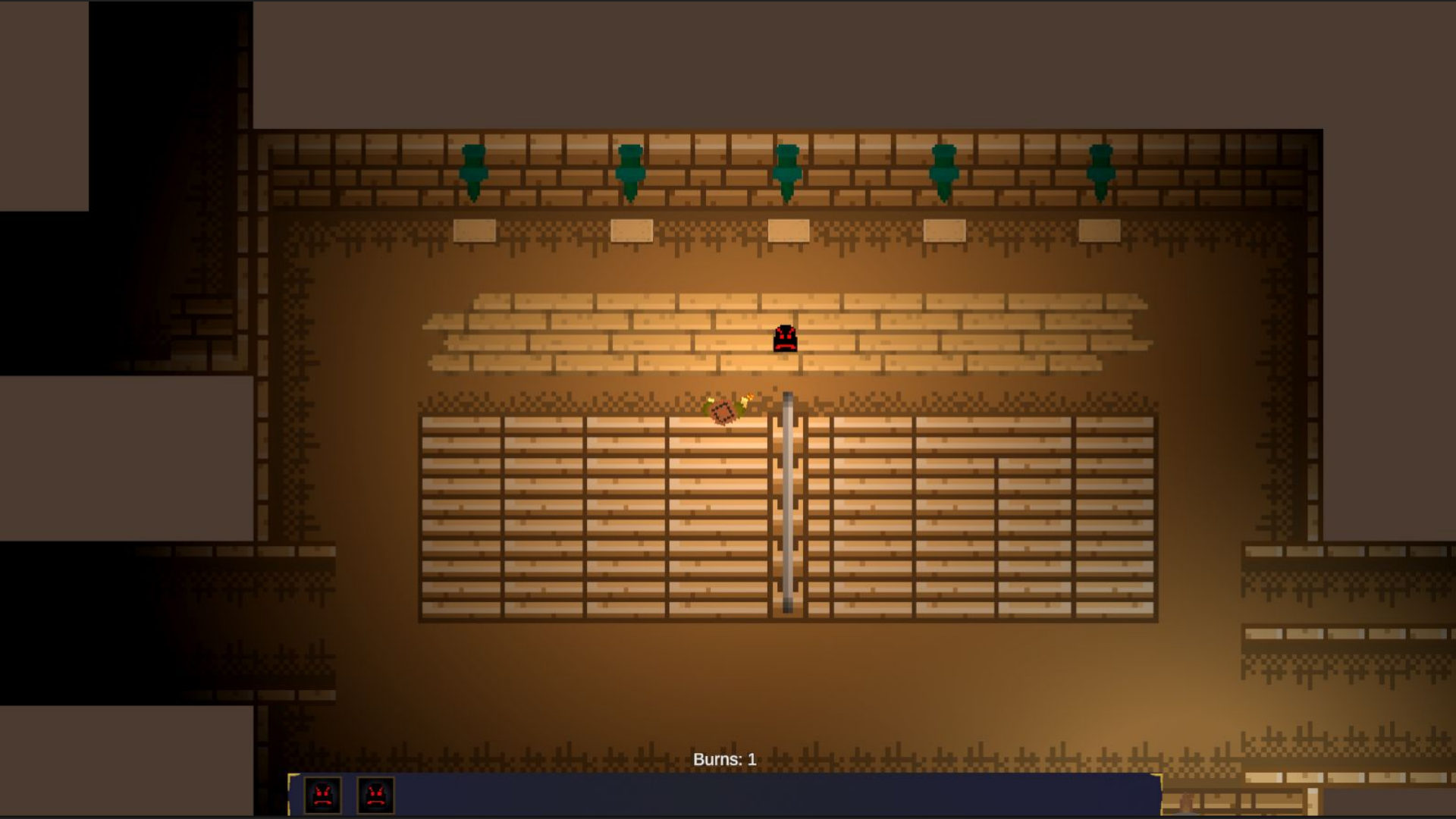
We provide a bunch of template for as Node or Edge

R_empty1 R_empty2 R_empty3 R_empty4 R_empty5 R_empty6 R_empty7

R_chest1 R_chest2 R_chest3 R_chest4 R_chest5 R_specialc... R_specialc...

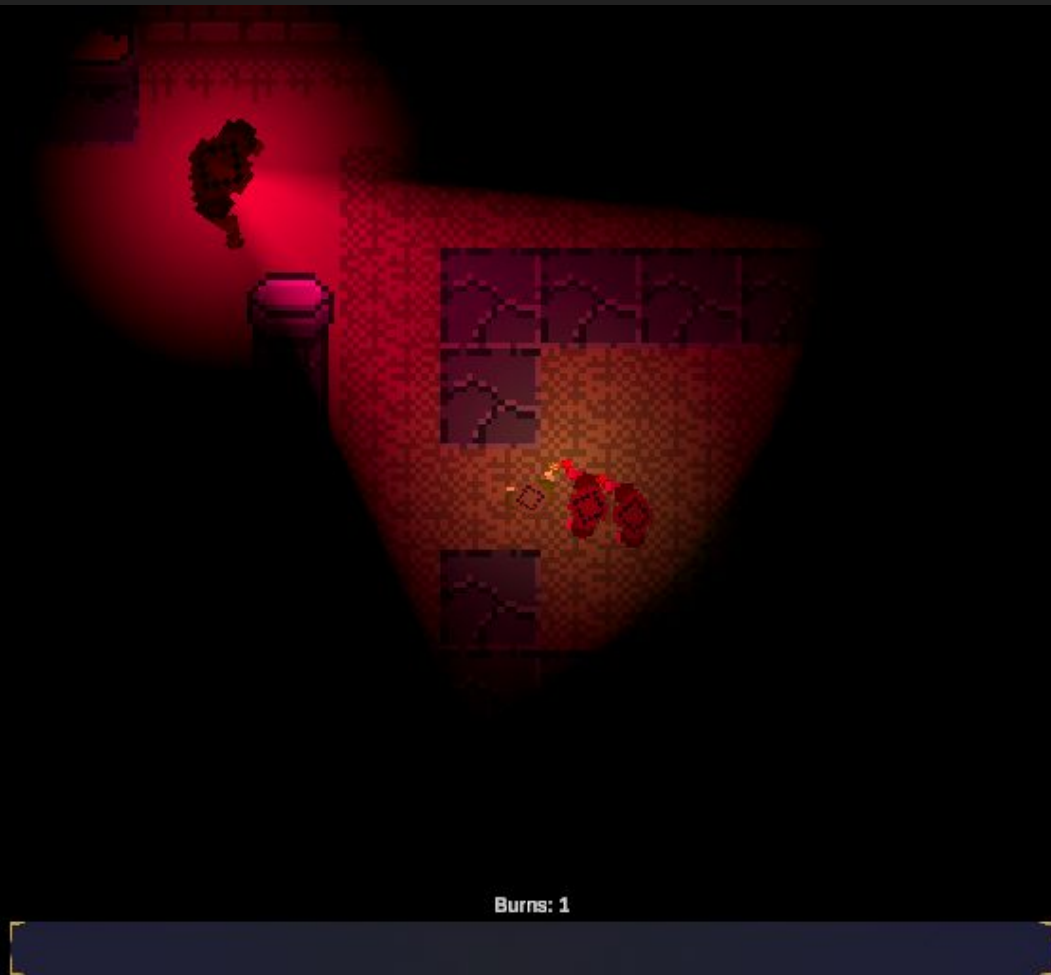C_straight1 C_straight2 C_straight3 C_straight4 C_turn1 C_turn2 C_turn3 C_turn4

Generation Result

Burns: 1

Burns: 1

Burns: 1

Burns: 1

[Try our GAME](#)