

## Directed Graphs

1 min

Imagine you're a superhero escaping a villain's lair. As you move from perilous room to perilous room, the doors close immediately behind you, barring any return.

For this dramatic example, we need a *directed* graph, where edges restrict the direction of movement between vertices.

We can move from spikes to lasers, but not from lasers to spikes. This differs from earlier examples when every edge was bi-directional.

Note the path spikes to lasers to piranhas to spikes. This path is a *cycle*, because it ends on the vertex where it began: spikes.

### Instructions

Consider a city with one-way streets, how would you model this with a directed graph?

What other cycles exist in this graph?

