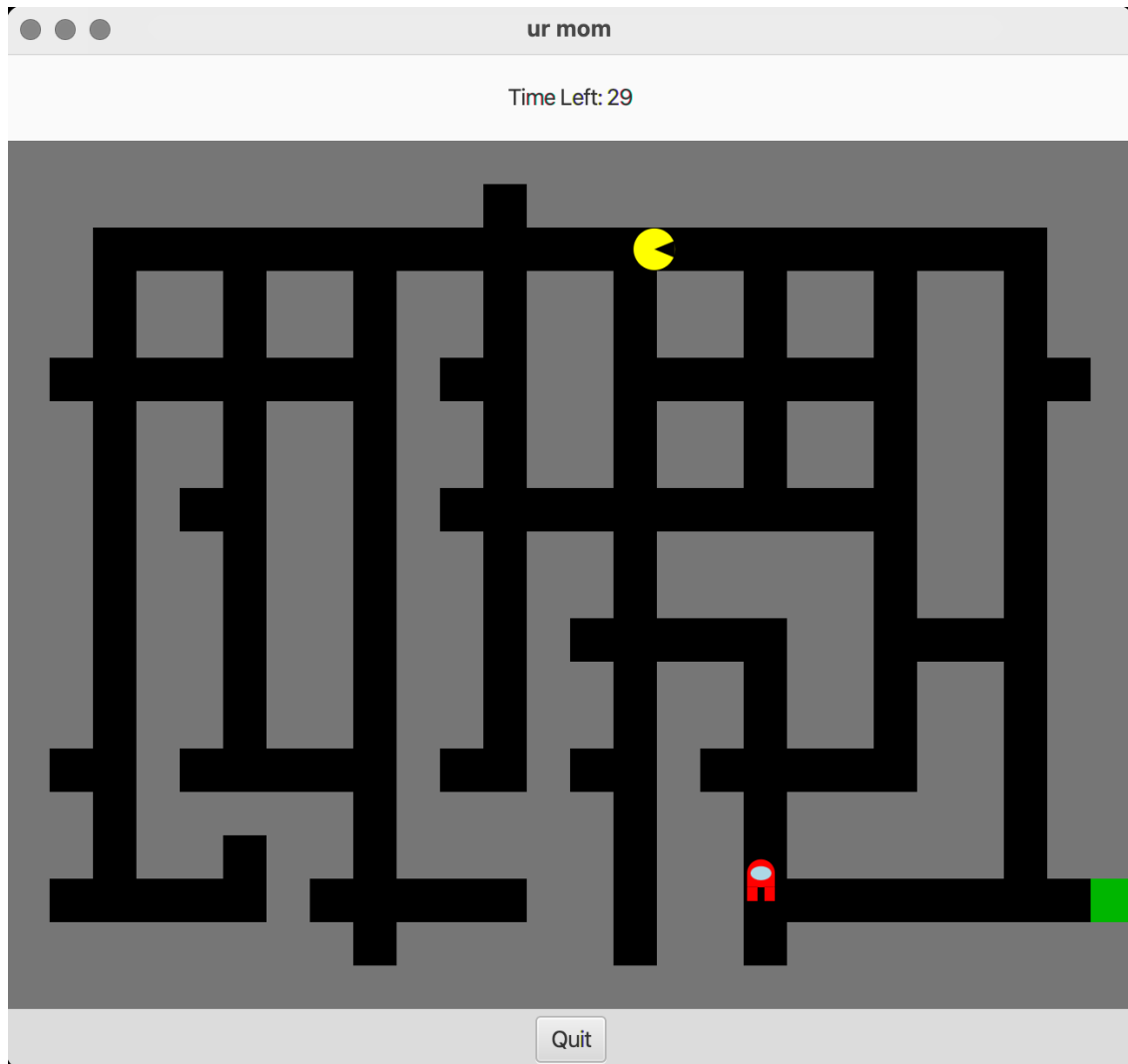


This maze creates a randomly generated maze of arbitrary size (specified in Constants). The maze has an exit tile in one corner, and a pacman in the opposite one. The user, playing as pacman, must escape the maze before the time runs out, and avoid the ghost along the way. A player can also ‘save’ their position in the maze, and repeatedly backtrack to those checkpoints.



Here's a list of functionality:

- The arrow keys are used to move pacman.
- 'S' is used to save their current position, while 'space' is used to backtrack. S can be pressed multiple times, saving different checkpoints. Pressing space will revisit them in reverse order.
- The user can quit the game at anytime with the button
- If the timer runs out, or the ghost collides with pacman, the game is lost.

- If pacman makes it to the end, the game is won.
- Different end screens will be displayed to reflect these three scenarios.
- The game also has a peculiar feature with turning at right angles. If turning isn't possible when the arrow key is pressed, pacman will continue moving in the same direction until a path opens up. Then, the player will turn in the intended direction. This will be overwritten if another movement key is pressed in the interim. This feature is pretty unnecessary ngl. I just thought it was kinda neat because most online pacmans have this.

There are also some issues

- The mazes aren't perfect. Ie. they can have multiple solutions. This doesn't really affect the gameplay though.
- The mazes also have certain components repeated across all random generations. That might be a bit of an issue if one played this repeatedly – since the patterns would be easy to detect.
- Pacman can move while being stuck halfway through walls sometimes. I'm not sure how to fix it in my implementation
- The ghost can often get stuck bouncing off two or three walls in an infinite loop. Its motion is pretty dumb. A better, future implementation might have BFS.
- Lastly, the game usually takes a few seconds to load. The characters have already started moving in the meantime. It's a bit annoying, but not a super big issue