

JPacman Implementation

Implementation Decisions:

We decided to implement a 'UndoStackFrame' would allow us to store the following:

- previous player tile
- previous player direction
- previous tiles each ghost is on (stored in a list)
- whether the last player action resulted in food being eaten

Each time the player does a valid move (doesn't hit a wall for example), that information is pushed to the stack. When the player hits the 'undo' button, we pop the stack and change the game states back to stored information. We first deoccupy the character location, occupy the old location, set their direction back to the way they were facing. If the player died, we resurrect them. If food was eaten, we put the food back, and decrement the score.

Challenges Faced:

Many of the challenges were not technical in nature but rather managerial. We did not keep track of our issues as well as we could have, and if we had had a better communication platform (such as Slack) we most likely would have been able to let each other know what we had accomplished between labs.

Doing the scrums were often difficult with the TA there, since it made it seem we were reporting more to the TA (and generally we hadn't done much between labs) than reporting to our team. If we instead could write a scrum report briefly outlining what we did and handed that in, that might have been preferable.

One technical difficulty we did face was that much of the existing code is private so we had to look for accessor methods (that may not exist) to work around the privates. At the end, we did find ways to implement the undo function fairly cleanly.