

Assignment 3: Group 4 - Textual and UML Design description

Overview

The main changes for implementing UNDO involve adding an Undoable Pacman Class that will extend Main UI, as well as an undo method. Because UNDO requires that players move to previous positions, Ghosts and Pacman will have to track each move as it occurs. Pacman will additionally have to track whether or not a move involves food consumption. The following modifications are organized by directories, as in the original framework.

Model Modifications

- Points Manager will be notified when points should be decreased because food is returned after Pacman undoes a move
- the MovePlayer and moveGhost methods will trigger game characters' push and pop actions to add and remove locations from their sets of tracked moves
- undoEatFood will be a new function like eatFood that returns food after an UNDO
- undoPoints will be a new function, similar to addPoints, will be added to reduce the total points after returning food items
- the move direction will be stored as a move takes place, so that previous positions can be returned to when undo is pressed. This addition will be made in the undoablePacmanInteraction class
- addSprite will be used to put food back
- the current game state will be checked before executing an UNDO to make sure that undoing is possible (game state is still in PLAYING)

UI Modifications

A player will be able to UNDO from the button panel and by pressing the backspace key, which is why both the buttonPanel and the keyListener will have to be extended.