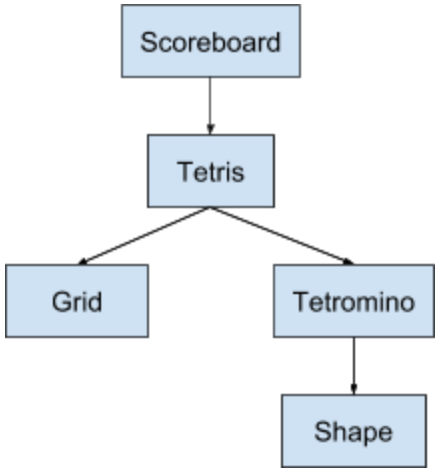
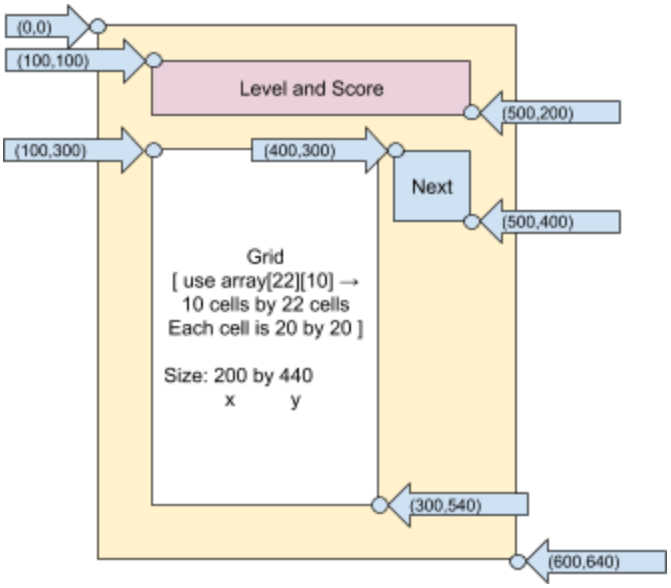
Supernova -- Angela Tom, Xinyi Huang, Tania Cao
APCS2 pd2
UML
2018-05-30





Tetris Class

- ➔ Instance Variables
  - ◆ - boolean gameOver // is the game over?
  - ◆ - Tetromino current // current tetromino
  - ◆ - Shape next // next tetromino shape
  - ◆ - int score // current score
  - ◆ - int lines // number of lines cleared
  - ◆ - int level // current level
- ➔ Methods
  - ◆ + input() // takes the user's input and updates the grid based on the input
  - ◆ + getScore() // returns the score

Grid Class

- ➔ Instance Variables
  - ◆ - int x, y // x and y values of top left corner of grid
  - ◆ - int[][] grid // array of cells where each cell contains a color
  - ◆ - boolean[] rowCompleted // array where each element is a row. If a row is complete, the element is true, otherwise it's false.
- ➔ Methods
  - ◆ + clearRow() // if there exists a true value in rowCompleted, clear the row with the true value
  - ◆ + update() // update the grid if the user input doesn't go over the grid borders

Tetromino Class

- ➔ Instance Variables
  - ◆ int[][] grid
- ➔ Methods
  - ◆ + rotate() → rotates the tetromino // up key
  - ◆ + left() → moves the tetromino to the left by one cell // left key
  - ◆ + right() → moves the tetromino to the right by one cell // right key
  - ◆ + down() → brings the tetromino down (default)
  - ◆ + softDown() → brings the tetromino down // down key
  - ◆ + hardDown() → brings the tetromino down // space key

Shape Class

- ➔ Instance Variables
  - ◆ - boolean[][] array // used to create the template of the shape
  - ◆ - int num // shape number
  - ◆ - int c // color
- ➔ Methods
  - ◆ Shape() // default constructor → uses the random num to choose which shape to make
  - ◆ J() // creates template for the shape J → set color, and edit array
  - ◆ S() // creates template for the shape S → set color, and edit array
  - ◆ Z() // creates template for the shape Z → set color, and edit array
  - ◆ T() // creates template for the shape T → set color, and edit array
  - ◆ O() // creates template for the shape O → set color, and edit array
  - ◆ I() // creates template for the shape I → set color, and edit array
  - ◆ L() // creates template for the shape L → set color, and edit array
  - ◆ + getColor() // returns the color of the shape

Scoreboard Class

- ➔ Instance Variables
  - ◆ - int[] scores
  - ◆ - int[] topScores
- ➔ Methods
  - ◆ + int add(int num) // adds num to the score array
  - ◆ + int[] getTopScores() // heapifies and gets top 5 scores