



**TI2206 Software Engineering Methods**

of the Computer Science curriculum

at the Delft University of Technology

**The n00bies**

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**Stakeholders:** TA

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## 

## **Functional requirements**

### **Must Haves**

* The game board shall have a grid of 10 cells wide and 24 cells high
* The topmost 4 rows are visually hidden
* A tetromino shall be placed at the top (center) of the grid when the game starts
* A tetromino shall be placed at the top (center) of the grid when the previous tetromino has landed on top of the other tetrominoes or on the bottom
* The tetromino can be rotated by 90 degrees to both sides by the player
* The game will consist of 5 different tetrominoes, each containing 4 blocks
* A row of blocks shall be cleared when it is filled with 10 blocks
* All blocks will move down 1 row when 1 row of 10 blocks has been cleared
* The tetromino is not allowed to be moved outside of the board
* The tetromino is not allowed to be rotated outside of the board
* The tetromino is not allowed to overlap with other blocks already fixed on the grid
* The tetromino will move down one block every X milliseconds
* If a tetromino falls down onto the bottom of the grid, the tetromino will be fixed
* if a tetromino falls down onto a fixed block the tetromino will be fixed
* The player will lose the game if a new tetromino is fixed outside of the board

### Should haves

* A new game can be started by the player
* A new game will start when the previous game has ended
* Each tetromino shall have a different colour
* There shall be a preview pane showing the next Tetromino to be placed in the grid

### Could haves

* The score of the player will be 0 when the game starts
* The final score will be shown when the game has ended
* The score shall increase for each row cleared by the player
* The game will follow the original Nintento scoring system:
  + 40 points will be given if 1 row of blocks is cleared
  + 100 points will be given if 2 rows of blocks are cleared at the same time
  + 300 points will be given if 3 rows of blocks are cleared at the same time
  + 1200 point will be given if 4 rows of blocks are cleared at the same time
* The game should have different levels where the tetrimos fall down with a different speed
* The game should have a maximum score, when reached, restarting the game on the next level
* The game has a high score system where the best 10 players can leave their names

### Would/won’t haves

* The game will keep track of the 10 highest scores with the names of the corresponding players
* The player shall be able to choose a soundtrack from a list of presets
* The player shall be able to choose a theme from a list of presets
* The game has sound effects
* The player shall be able to choose at which level to start the game
* The player shall be able to pause the game

## Non Functional requirements

* The game shall be playable on: Windows 7 or higher, Mac OS X 10.8 or higher and Linux
* The game shall be developed in Java
* A first build shall be delivered the 16th of September
* A fully working version shall be delivered the 4th of November
* Every week there will be a deliverable, working with the Scrum Methodology

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