Board

moveLeft

Board(8, 6)

|  |  |  |  |
| --- | --- | --- | --- |
| Varients | hasCollision | Test Case | GRAPHICS |
| 1 | T | "......\n" +  ".T....\n" + "TTT...\n" + "......\n" + "......\n" + "......\n" + "......\n" + "......\n" |  |
| 2 | F | "......\n" + "..T...\n" + ".TTT..\n" + "......\n" + "......\n" + "......\n" + "......\n" + "......\n" |  |

moveDown

Board(8, 6)

|  |  |  |  |
| --- | --- | --- | --- |
| Varients | hasCollision | Test Case | GRAPHICS |
| 1 | T | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + "......\n" + "...T..\n" + "..TTT.\n" |  |
| 2 | F | ".....\n" + "..T...\n" + ".TTT..\n" + "......\n" + "......\n" + "......\n" + "......\n" + "......\n" |  |

moveRight

Board(8, 6)

|  |  |  |  |
| --- | --- | --- | --- |
| Varients | hasCollision | Test Case | gRAPHICS |
| 1 | T | "......\n" +  "......\n" + "....T.\n" + "...TTT\n" + "......\n" + "......\n" + "......\n" + "......\n" |  |
| 2 | F | "......\n" + "...T..\n" + "..TTT.\n" + "......\n" + "......\n" + "......\n" + "......\n" + "......\n" |  |

rotateRight

Board(8, 6)

|  |  |  |  |
| --- | --- | --- | --- |
| Varients | hasCollision | Test Case | gRAPHICS |
| 1 | T | "......\n" +  "......\n" + "......\n" + "......\n" + "T.I...\n" + "TTI...\n" + "T.I...\n" + "..I...\n" |  |
| 2 | F | "......\n" + "..T...\n" + ".TTT..\n" + "......\n" + "......\n" + "......\n" + "......\n" + "......\n" |  |

rotateLeft

|  |  |  |  |
| --- | --- | --- | --- |
| Varients | hasCollision | Test Case | gRAPHICS |
| 1 | T | "......\n" +  "......\n" + "......\n" + "......\n" + "T.I...\n" + "TTI...\n" + "T.I...\n" + "..I...\n" |  |
| 2 | F | "......\n" + "..T...\n" + ".TTT..\n" + "......\n" + "......\n" + "......\n" + "......\n" + "......\n" |  |

drop

|  |  |  |  |
| --- | --- | --- | --- |
| Varients | hasCollision | Test Case | gRAPHICS |
| 1 | T | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + "......\n" + ".T..T.\n" + "TTTTTT\n" |  |
| 2 | F | "....L.\n" + "....LL\n" + "....I.\n" + "....I.\n" + "....I.\n" + "....I.\n" + ".T..T.\n" + "TTTTTT\n" |  |

hasFalling

|  |  |  |  |
| --- | --- | --- | --- |
| Varients | hasCollision | Test Case | gRAPHICS |
| 1 | T | "......\n" + "..T...\n" + ".TTT..\n" + "......\n" + "......\n" + "......\n" + "......\n" + "......\n" |  |
| 2 | F | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + "......\n" + "...T..\n" + "..TTT.\n" |  |

Tertromino

rotateLeft



|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VERIENTS | H | I | O  T |  | T | T | T | Z | TEST CASE | GRAPHICS |
| 1 | T |  |  |  |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + ".IIII.\n" + "......\n" + "......\n" + "......\n" |  |
| 2 | F | T |  |  |  |  |  |  | "......\n" +  "......\n" + "...I..\n" + "...I..\n" + "...I..\n" + "...I..\n" + "......\n" + "......\n" |  |
| 3 | F | F | T |  |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "...OO.\n" + "...OO.\n" + "......\n" + "......\n" |  |
| 4 | F | F | F | T |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..T...\n" + ".TTT..\n" + "......\n" + "......\n" |  |
| 5 | F | F | F | F | T |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..T...\n" + ".TT...\n" + "..T...\n" + "......\n" |  |
| 6 | F | F | F | F | F | T |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".TTT..\n" + "..T...\n" + "......\n" |  |
| 7 | F | F | F | F | F | F | T |  | "......\n" +  "......\n" + "......\n" + "......\n" + ".T....\n" + ".TT...\n" + ".T....\n" + "......\n" |  |
| 8 | F | F | F | F | F | F | F | T | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".ZZ...\n" + "..ZZ..\n" + "......\n" |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VARIENTS | .... | N | ReZ | ReN | L | ┘ | ┐ | TEST CASE | GRAPHICS |
| 9 | F | T |  |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..Z...\n" + ".ZZ...\n" + ".Z....\n" + "......\n" |  |
| 10 | F | F | T |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + "..ZZ..\n" + ".ZZ...\n" + "......\n" |  |
| 11 | F | F | F | T |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..Z...\n" + "..ZZ..\n" + "...Z..\n" + "......\n" |  |
| 12 | F | F | F | F | T |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..L...\n" + "..L...\n" + "..LL..\n" + "......\n" |  |
| 13 | F | F | F | F | F | T |  | "......\n" +  "......\n" + "......\n" + "......\n" + "...L..\n" + ".LLL..\n" + "......\n" + "......\n" |  |
| 14 | F | F | F | F | F | F | T | "......\n" +  "......\n" + "......\n" + "......\n" + "..LL..\n" + "...L..\n" + "...L..\n" + "......\n" |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VARIENTS | ... | ┌ | ┘ | └ | 「 | ┐ | TEST CASE | GRAPHICS |
| 15 | F | T |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..LLL.\n" + "..L...\n" + "......\n" + "......\n" |  |
| 16 | F | F | T |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "...L..\n" + "...L..\n" + "..LL..\n" + "......\n" |  |
| 17 | F | F | F | T |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".LLL..\n" + "...L..\n" + "......\n" |  |
| 18 | F | F | F | F | T |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..LL..\n" + "..L...\n" + "..L...\n" + "......\n" |  |
| 19 | F | F | F | F | F | T | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".LLL..\n" + ".L....\n" + "......\n" |  |

rotateRight



|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VERIENTS | H | I | O  T |  | T | T | T | Z | TEST CASE | GRAPHICS |
| 1 | T |  |  |  |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + ".IIII.\n" + "......\n" + "......\n" + "......\n" |  |
| 2 | F | T |  |  |  |  |  |  | "......\n" +  "......\n" + "...I..\n" + "...I..\n" + "...I..\n" + "...I..\n" + "......\n" + "......\n" |  |
| 3 | F | F | T |  |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "...OO.\n" + "...OO.\n" + "......\n" + "......\n" |  |
| 4 | F | F | F | T |  |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..T...\n" + ".TTT..\n" + "......\n" + "......\n" |  |
| 5 | F | F | F | F | T |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..T...\n" + "..TT..\n" + "..T...\n" + "......\n" |  |
| 6 | F | F | F | F | F | T |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".TTT..\n" + "..T...\n" + "......\n" |  |
| 7 | F | F | F | F | F | F | T |  | "......\n" +  "......\n" + "......\n" + "......\n" + "..T...\n" + ".TT...\n" + "..T...\n" + "......\n" |  |
| 8 | F | F | F | F | F | F | F | T | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".ZZ...\n" + "..ZZ..\n" + "......\n" |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VARIENTS | .... | | N | | ReZ | | ReN | | | L | ┌ | | ┐ | | TEST CASE | | GRAPHICS | |
| 9 | F | | T | |  | |  | | |  |  | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + "..Z...\n" + ".ZZ...\n" + ".Z....\n" + "......\n" | |  | |
| 10 | F | | F | | T | |  | | |  |  | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + "..ZZ..\n" + ".ZZ...\n" + "......\n" | |  | |
| 11 | F | | F | | F | | T | | |  |  | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + "..Z...\n" + "..ZZ..\n" + "...Z..\n" + "......\n" | |  | |
| 12 | F | | F | | F | | F | | | T |  | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + "..L...\n" + "..L...\n" + "..LL..\n" + "......\n" | |  | |
| 13 | F | | F | | F | | F | | | F | T | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".LLL..\n" + ".L....\n" + "......\n" | |  | |
| 14 | F | | F | | F | | F | | | F | F | | T | | "......\n" +  "......\n" + "......\n" + "......\n" + "..LL..\n" + "...L..\n" + "...L..\n" + "......\n" | |  | |
| VARIENTS | | **...** | | **┘** | | **」** | | **└** | **「** | | | **┐** | | **TEST CASE** | | **GRAPHICS** | |
| 15 | | F | | T | |  | |  |  | | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + "..LLL.\n" + "....L.\n" + "......\n" | |  | |
| 16 | | F | | F | | T | |  |  | | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + "...L..\n" + "...L..\n" + "..LL..\n" + "......\n" | |  | |
| 17 | | F | | F | | F | | T |  | | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + ".L....\n" + ".LLL..\n" + "......\n" + "......\n" | |  | |
| 18 | | F | | F | | F | | F | T | | |  | | "......\n" +  "......\n" + "......\n" + "......\n" + "..LL..\n" + "..L...\n" + "..L...\n" + "......\n" | |  | |
| 19 | | F | | F | | F | | F | F | | | T | | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".LLL..\n" + "...L..\n" + "......\n" | |  | |

Run()



|  |  |  |  |
| --- | --- | --- | --- |
| VARIENTS | !Board.hasFalling | TEST CASE | GRAPHICS |
| 1 | T | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".LLL..\n" + "...L..\n" + "......\n" |  |
| 2 | F | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + "......\n" + "...T..\n" + "..TTT.\n" |  |

gameRender()

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| VARIENTS | hasAction | doubleBufferImage == NULL | doubleBufferImage == NULL | TEST CASE | GRAPHICS |
| 1 | T | T | T |  |  |
| 2 | T | T | F |  |  |
| 3 | T | F | T |  |  |
| 4 | T | F | F |  |  |
| 5 | F | T | T |  |  |
| 6 | F | T | F |  |  |
| 7 | F | F | T |  |  |
| 8 | F | F | F |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| VARIENTS | String code = T | String code = O | String code = Z | String code = L | | TEST CASE | GRAPHICS |
| 1 | T |  |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + "......\n" + "...T..\n" + "..TTT.\n" | |  |
| 2 | F | T |  |  | "......\n" +  "......\n" + "......\n" + "......\n" + "...OO.\n" + "...OO.\n" + "......\n" + "......\n" | |  |
| 3 | F | F | T |  | "......\n" +  "......\n" + "......\n" + "......\n" + "......\n" + ".ZZ...\n" + "..ZZ..\n" + "......\n" | |  |
| 4 | F | F | F | T | "......\n" +  "......\n" + "......\n" + "......\n" + "..L...\n" + "..L...\n" + "..LL..\n" + "......\n" | |  |

KeyPressed()

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| VARIENTS | VK\_DOWN | VK\_LEFT | VK\_RIGHT | TEST CASE | curGRAPHICS | nextGRAPHICS |
| 1 | T |  |  | moveDown |  |  |
| 2 | F | T |  | moveLeft |  |  |
| 3 | F | F | T | moveRight |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| VARIENTS | ... | VK\_CONTROL | VK\_SHIFT | TEST CASE | curGRAPHICS | nextGRAPHICS |
| 5 | F | T |  | rotateRight |  |  |
| 6 | F | F | T | rotateLeft |  |  |

ScoreCounter

receiveNumberOfClearedLines()

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| VARIENTS | Num > 0 | TEST CASE | curGRAPHICS | nextGRAPHICS |
| 1 | T | num = 1 | C:\Users\Lemon\Desktop\8.PNG |  |
| 2 | F | num = 0 | C:\Users\Lemon\Desktop\5.PNG | C:\Users\Lemon\Desktop\6.PNG |