Notes:

- To ensure the best testing experience, we recommend restarting the program (or use the "restart" command) for every test case just to make sure that no extra blocks are left on the board.
- The gameplay demonstration for all Bonus features are shown at the end of the file.
- Our bonus features do not have effect on the program's core project; bonus features do not need a bonus command line argument when running.
- Sequence files are included in the submission, but to be safe,
  they contain the following blocks:
  sequence1.txt: O I J T S Z L
  sequence2.txt: O O O O O I

Table of Contents

Basic Commands

Block Movement

Commands:
t
5right
2down
4left
12right
3clockwise
counterclockwise
Drop

File input / random & no random

Sequence files are read in to generate blocks for level 0.
The Sequence command can read from input files and execute them as commands.
random & no random are shown in Levels.

Misspelled / Unrecognized Commands

Commands:
dqnwo

```
Please type your command:
dqnwo

Unrecognized Command! Try again.
Type "see" to see all available commands.

Please type your command:
```

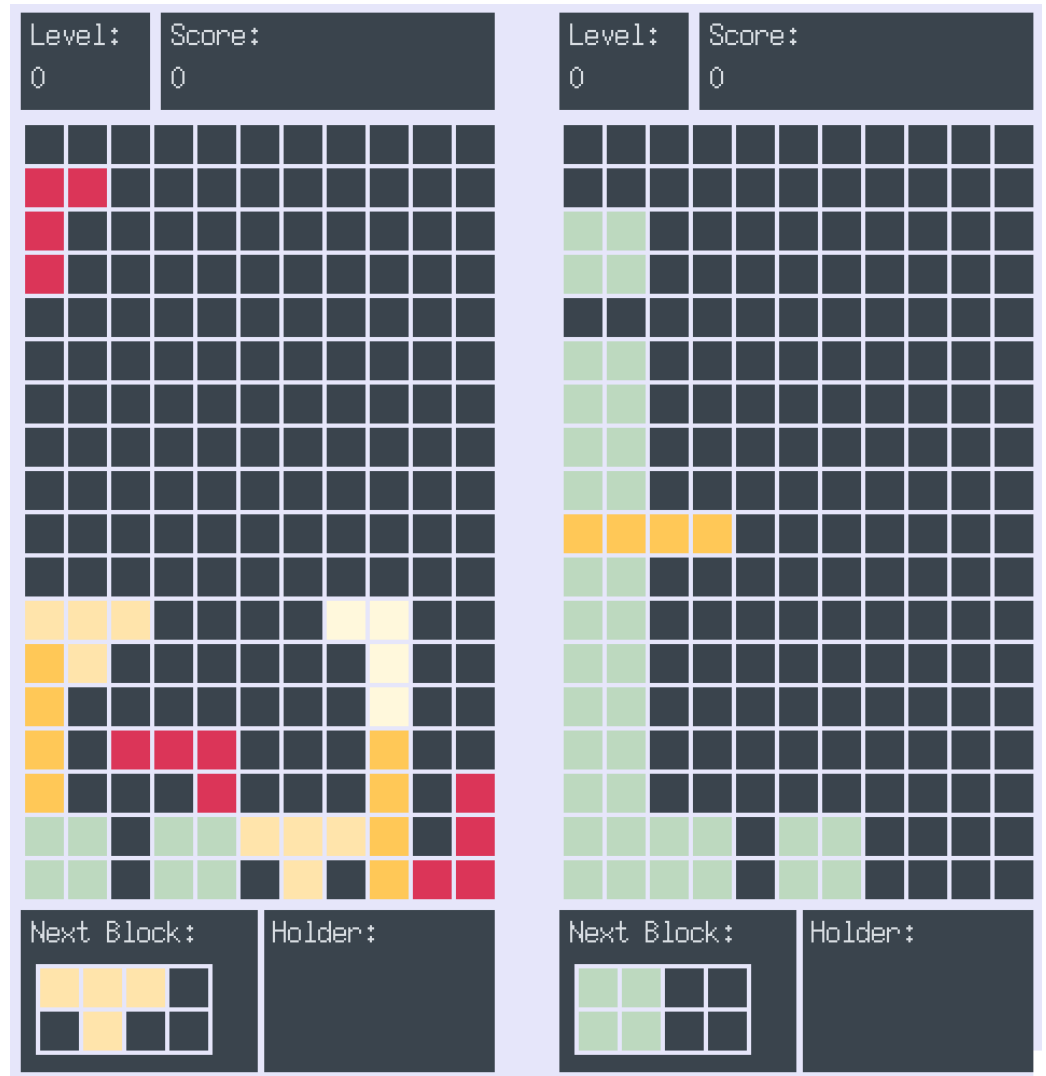## Unreadable input files

Commands:
sequence nosuchfile

```
Please type your command:
sequence nosuchfile

Your file is not readable :(
Please check if you insert the correct name
```

Hint

Commands:

o
dr
o
dr
o
3ri
dr
dr
2cl
2ri
dr
dr
t
5ri
dr
dr
i
cl
8ri
dr
2ri
dr
j
countercl
30ri
dr
dr
i
cl
dr
dr
t
dr
5ri
dr
l
countercl
7ri
dr
dr
j
cl
hint

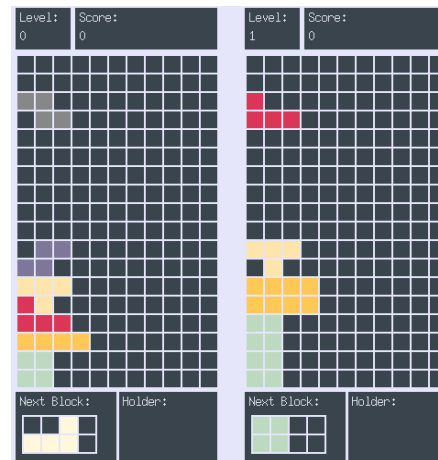Hint: Move 9 right, then drop!
Please type your command:

Levels

Level 1 & 2 Random Generation

sequence2.txt (player 2) has sequence Blocks "O O O O O I". The following test is to demonstrate the random block generation in level 1 & 2.

Commands:
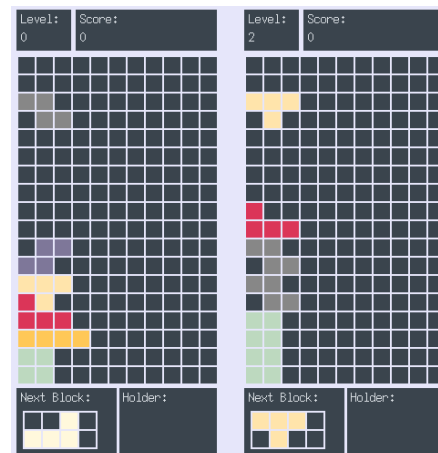
Drop
levelup
Drop
Drop
Drop
Drop
Dr
Dr
Drop
Drop
Drop

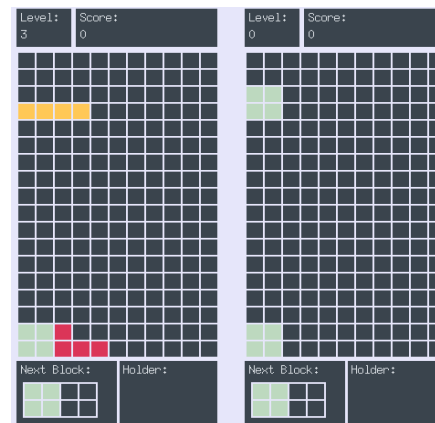restart ⬛▶
y

Would you like to play again? [y / n]

Drop
2levelup
Drop
Drop
Drop
Drop
Drop
Drop
Drop
Drop
Drop

Level 3 Heavy

Commands:

3levelup
dr
dr
j
4right
2left
down
clockwise
counterclockwise
drop

Level 4 Heavy & * Block Drop

Commands:

4levelup
dr
dr
right
left
clockwise
counterwise
dr
dr
dr
dr
dr
dr
dr

<mark>Scoring</mark>

ClearRow

Commands:

3levelup
o
dr
dr
o
2ri
dr
dr
o
4ri
dr
dr
o
6ri
dr
dr
j
8ri
dr

Current Level

$$(3 + 1) ^ \wedge 2 = 16$$

Number of Lines Cleared

ClearBlock

Commands:

2levelup
i
dr
dr
levelup
i
4ri
dr
dr
l
8ri
dr

First i block was
generated in level 2
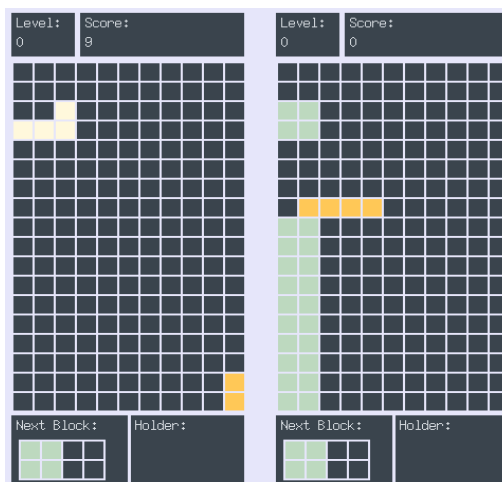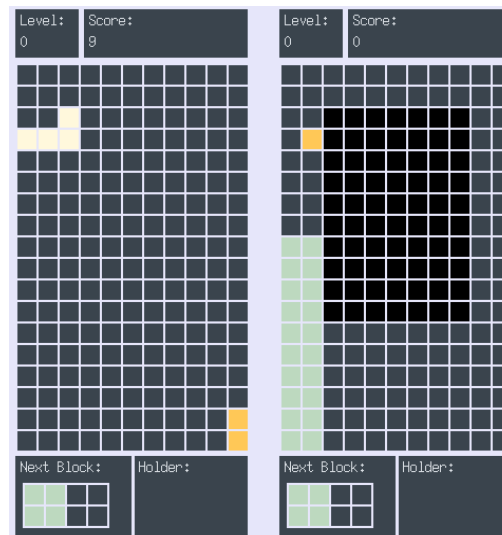
Second i block was
generated in level 3

Current Level

$$((2 + 1)^{\wedge} 2 + (3 + 1)^{\wedge} 2 + (3 + 1)^{\wedge} 2 = 41$$

plus one

plus one

Number of Lines Cleared

Special Actions

Blind

Commands:

o
dr
dr
o
2ri
dr
dr
o
4ri
dr
dr
o
6ri
dr
dr
o
8ri
dr
dr
i
cl
10ri
dr
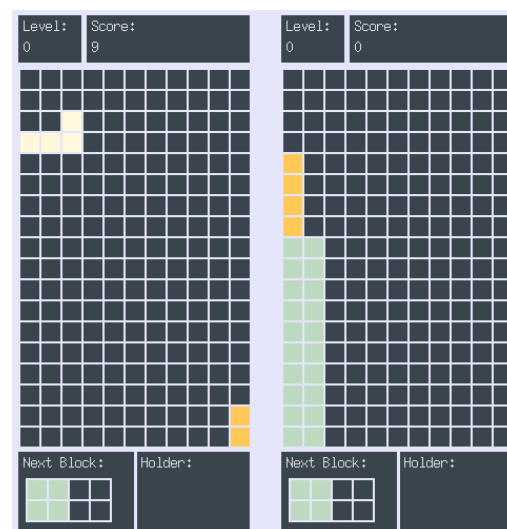blind
right
dr

Heavy

Commands:

o
dr
dr
o
2ri
dr
dr
o
4ri
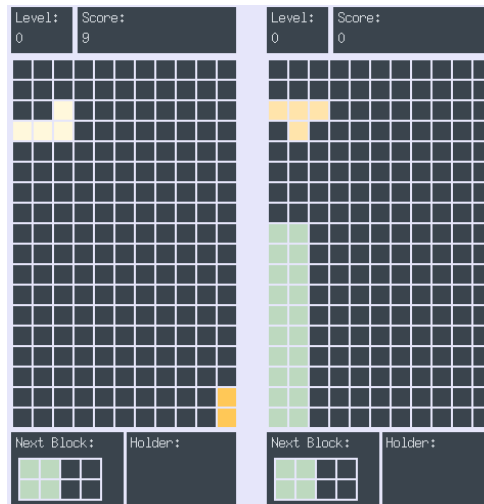dr
dr
o
6ri
dr
dr
o
8ri
dr
dr
i
cl
10ri
dr
heavy

right
cl
left

Force

Commands:

o
dr
dr
o
2ri
dr
dr
o
4ri
dr
dr
o
6ri
dr
dr
o
8ri
dr
dr
i
cl
10ri
dr
force
T

Special Action Heavy + Level Heavy

Commands:

o
drop
4levelup
o
drop
o
2right
Drop
O
2right
Drop
o
4right
Drop
O
4right
Drop
O
6right
Drop
O
6right
Drop
O
8right
Drop
O
8right
Drop
I
clockwise
10right
Drop

<mark>Heavy</mark>

One row down from Level Heavy +
Two rows down from Special Action Heavy

Left
2right

Clockwise
counterclockwise

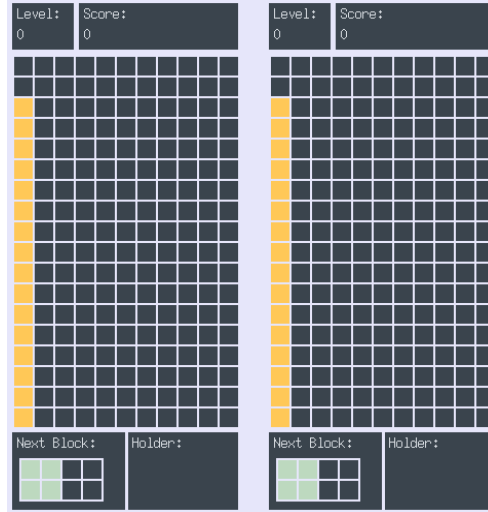Rotations only trigger one row down from Level Heavy
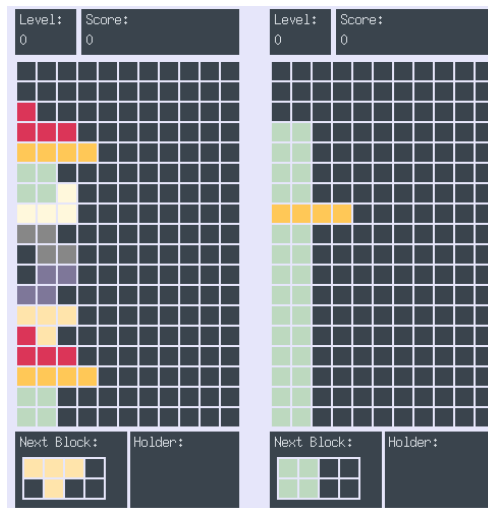
Left
Left
Right
Drop

Tie

Commands:

i
cl
dr
i
cl
dr
i
cl
dr
i
cl
dr
i
cl
dr
i
cl
dr
i
cl
dr
i
cl
dr
i
cl
dr

y

10drop
10drop

It's a Tie!
Would you like to play again? [y / n]

Next block not able to be placed on the board

Commands:

i
cl
dr
i
cl
dr
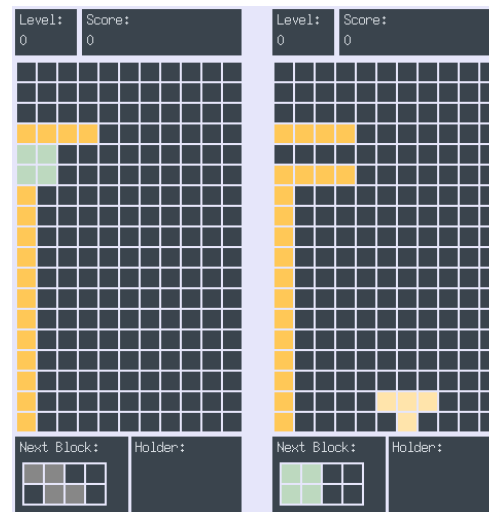i
cl
dr
i
cl
dr
i
cl
dr
i
cl
dr
o
dr
i
dr
i
dr
t
5right
dr

Player 1 has lost here since the i block on the 4th row has covered the generation area.
Player 2's next i block is able to generate on the 4th row, thus, player 2 wins.

Bonus Features

To see specific functionalities of the bonus features, please view the Extra Credits section in the paperwork. If you have any doubts regarding the bonus features, please use the "see" command, which is introduced in the design document.
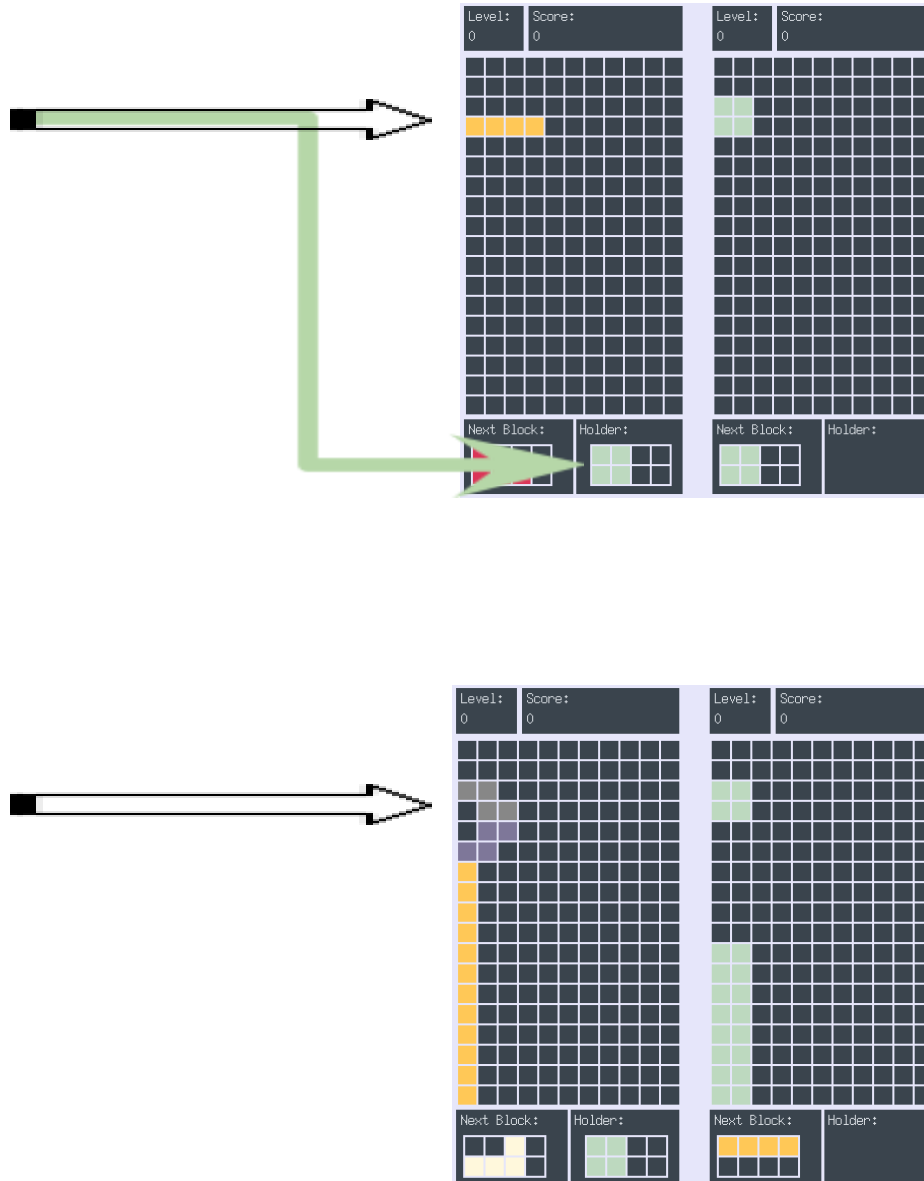
Block Holder

o
store
i
cl
dr
dr
i
cl
dr
dr
i
cl
dr
dr
s
dr
dr
store
store
dr
t
store
dr

Level 5

5levelup
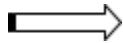dr
dr
2ri
dr
2ri
dr
6ri
dr
4ri
dr
dr
6ri
dr
2ri
dr   ⟹   A random block is generated since we haven't cleared
8ri   any row in the first 5 round.
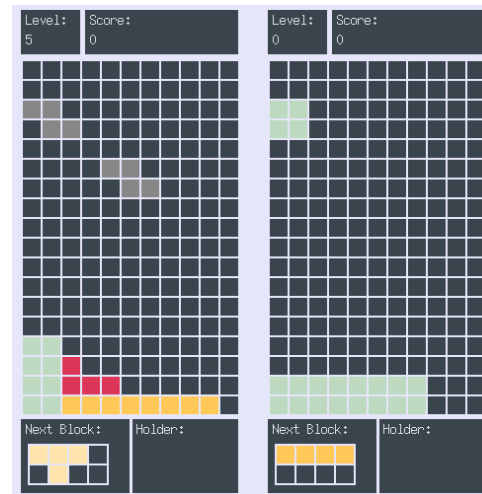dr
10ri
dr
dr
cl
11ri
dr
4ri
dr
down
down
2ri
dr
6ri
dr
dr
dr
dr   ⟹   Another random block is generated since we haven't
             cleared any row in the first 10 round.
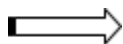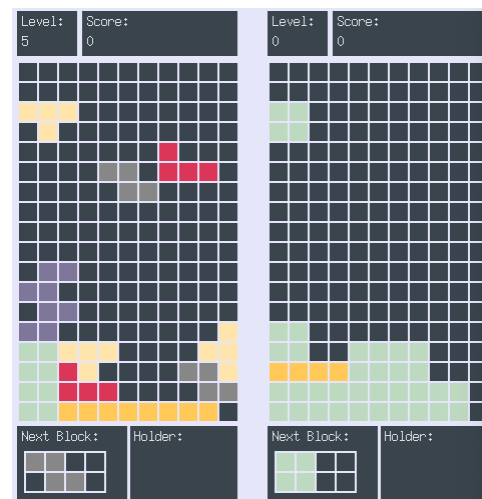
Select

4levelup

o

Drop

4levelup

o

Drop

I

2right

Drop

I

2right

Drop

O

10right

Drop

O

10right

Drop

O

Drop

O

Drop

O

2right

Drop

O

2right

Drop

O

7right
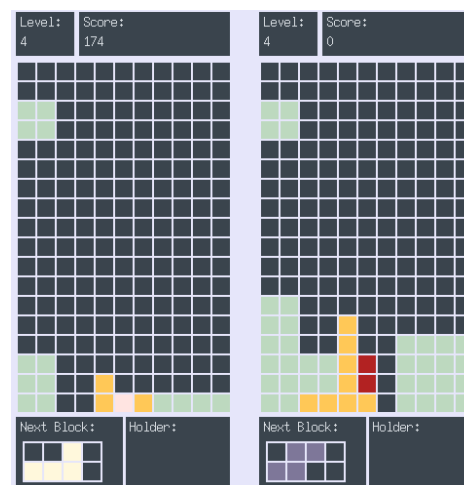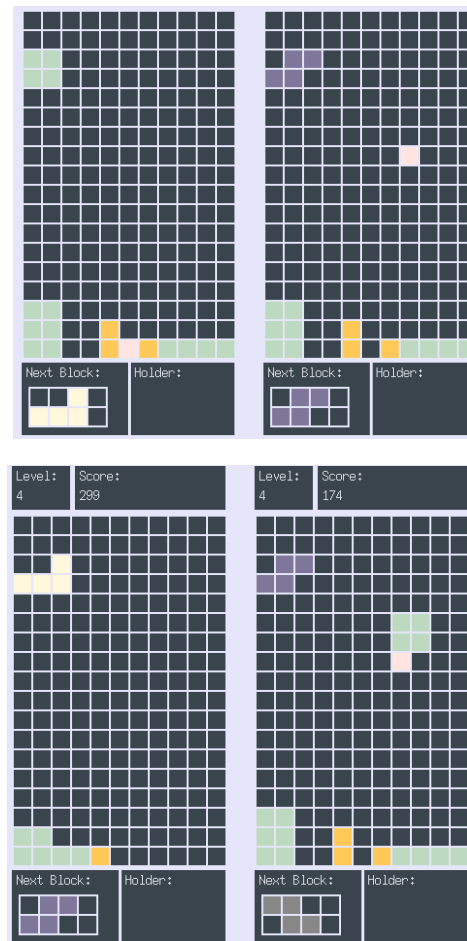
Drop

O

7right

Drop

O

10right

drop

o

10right

First Select

Drop

O

7right

Drop

O

7right

Drop

I

Clockwise

4right

Drop

I

Clockwise

4right

Drop

O

Drop

O

Drop

I

Clockwise

6right

Drop

I

Clockwise

6right

drop

O
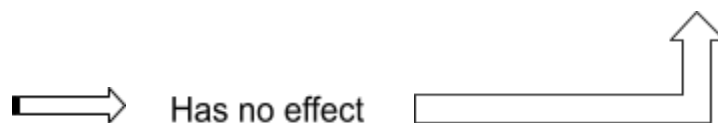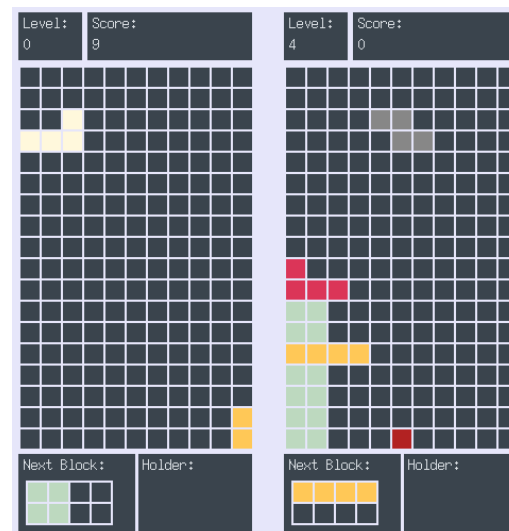
2right

Drop

O

7right

Drop

Drop

Second Select

We note that since we have selected the cell at coordinate 7, 7, it acts the same as any other blocks. Hence, when a O block is dropped, it stayed on top of the selected block as intended.

JustDrop

o
dr
4levelup
dr
o
2ri
dr
dr
o
4ri
dr
dr
o
6ri
dr
dr
o
8ri
dr
dr
i
cl
10ri
dr
<mark>justdrop</mark>
left
4ri
<mark>down</mark>
<mark>down</mark>
cl
counter
drop

After the we take the 4ri command, it makes sense that even if we are in level 4, the heavy is not applied to the current block since we disabled the down feature in the justdrop.

Has no effect

Command Grouping

<mark>group</mark>
t
5right
clockwise
left
7counterclockwise
drop
<mark>end</mark>

newcommand   ⟵   Name the new grouped commands
                          (you might need to type in this separately).

newcommand

Command Alias

alias
drop
newdrop
t
newdrop

Alias & Grouping

alias
clockwise
newclockwise
group
t
5right
newclockwise
12left
drop
end
newgroup
newgroup