4	4	4	
	2		8
	4	4	8
2	4	8	8

	2	4
	4	8
	4	8
	32	32

ever_moved = False

start = [0, self.size - 1]

stop = [self.size, 0 - 1]

direction
in [UP, DOWN]

PN = 0

PN = 1

for row in
range(0, size, +1)

for col in
range(0, size, +1)
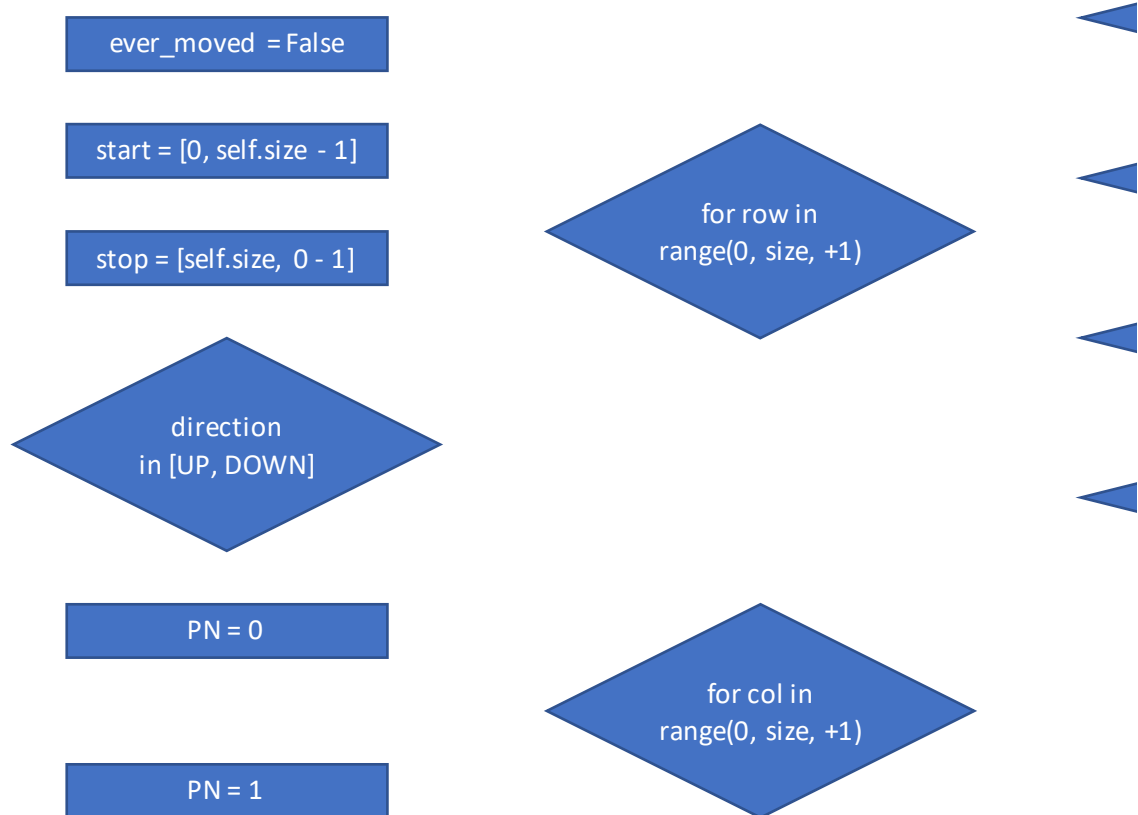
direction is UP

direction is DN

direction is LF

direction is RT

```
┌─────────────────────┐
│    root = [0, 0]    │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│  focused = [1, 0]   │
└─────────────────────┘
           │
           ▼
        ╱─────╲
      ╱         ╲                    ┌─────────────────────┐
    ╱  if [0, 0] == 0 and ╲  yes     │   [0, 0] <- [1, 0]  │
    ╲  [1, 0] != 0        ╱ ───────▶ │   [1, 0] <- 0       │
      ╲                 ╱            └─────────────────────┘
        ╲─────╱
           │ no
           ▼
        ╱─────╲
      ╱         ╲                    ┌─────────────────────┐
    ╱  if [0, 0]  ╲       yes        │   [0, 0] *=2        │
    ╲  == [1, 0] != 0  ╱ ──────────▶ │   [1, 0] <- 0       │
      ╲             ╱                └─────────────────────┘
        ╲─────╱
           │
           ▼
        ╱─────╲
      ╱         ╲
    ╱  if 0 != [0, 0] ╲   yes
    ╲  != [1, 0] != 0  ╱ ──────────▶
      ╲             ╱
        ╲─────╱
           │ no
           ▼
┌─────────────────────┐
│  focused = [2, 0]   │
└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│    root = [1, 0]    │
└─────────────────────┘
```

```
┌─────────────────┐
│    root = ...    │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│  focused = ...   │
└─────────────────┘
         │
         │
         ▼
       ◇ if root == 0 and        ┌──────────────────┐
       ◇ focused != 0    ──yes──▶│  root <- focused  │
                                 │  focused <- 0     │
         │ no                    └──────────────────┘
         ▼
       ◇ if root            ┌──────────────────┐
       ◇ == focused != 0  ──yes──▶│  root *=2       │
                                  │  focused <- 0    │
         │                        └──────────────────┘
         ▼
       ◇ if 0 != root
       ◇ != focused != 0  ──yes──
         │ no
         ▼
┌─────────────────┐
│  focused = ...   │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│    root = ...    │
└─────────────────┘
```