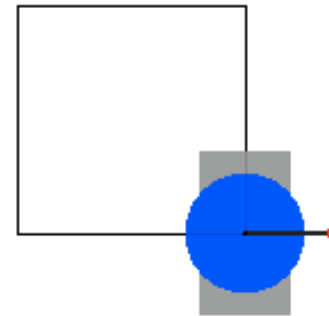# Bot Inc.

http://kilana.unibe.ch:9090/botinc/

ducasse@iam.unibe.ch

Teaching Programming to Kids of 7..77

- What is a program?

- What is a variable, loop?

- How can I reuse and compose some programs

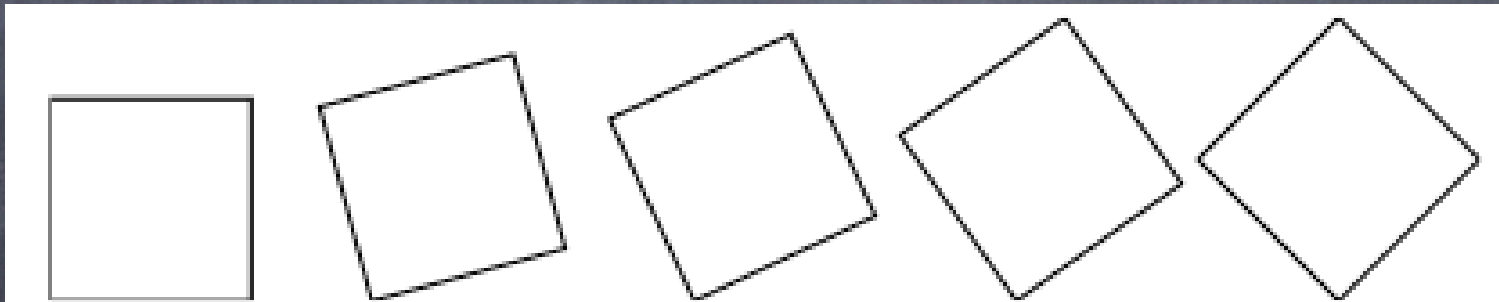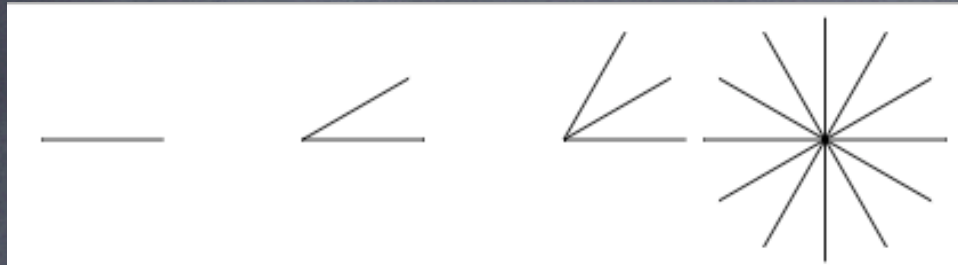- Programming is fun

A kind of Turtle...

Working

Bot Workspace

Do It All   Do It   Clear Trails   Clear Bots   Clear All

```
| pica |
pica := Bot new.
pica square: 100
```

Micro Browser: Bot

private morphic wrapper
shapes
turning
variables

square:

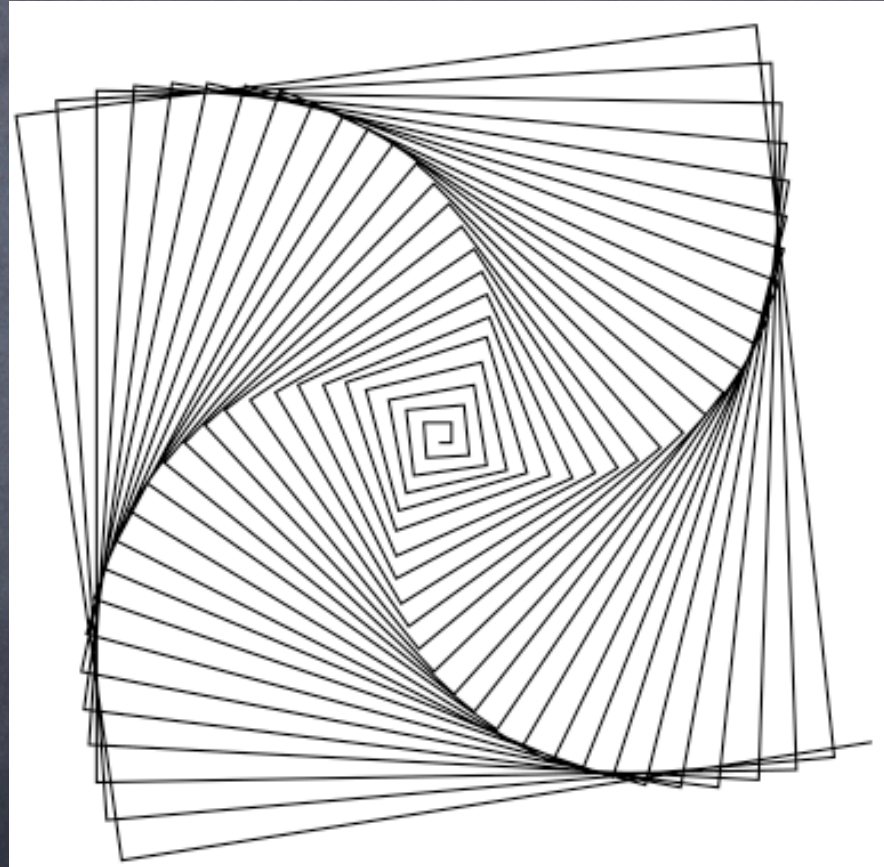**square:** size

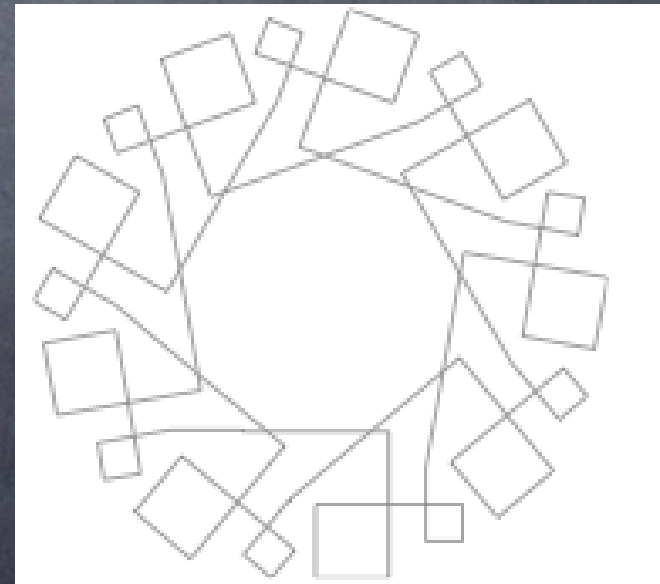# Directions, Absolute, Relative Angles
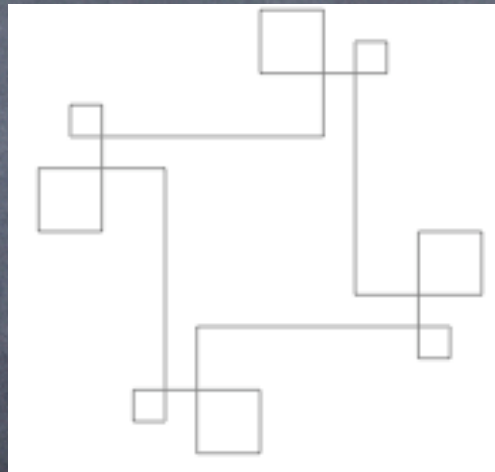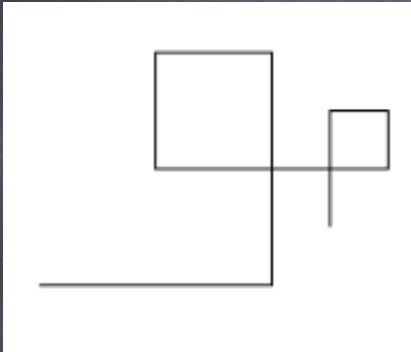
Why Loops?


```
| pica |
pica := Bot new.
pica go: 70.
pica turnLeft: 180.
pica go: 70.
pica turnLeft: 180.
pica turnLeft: 60.
pica go: 70.
pica turnLeft: 180.
pica go: 70.
pica turnLeft: 180.
pica turnLeft: 60.
pica go: 70.
pica turnLeft: 180.
pica go: 70.
pica turnLeft: 180.
pica turnLeft: 60.
pica go: 70.
pica turnLeft: 180.
pica go: 70.
pica turnLeft: 180.
pica turnLeft: 60.
pica go: 70.
pica turnLeft: 180.
pica go: 70.
pica turnLeft: 180.
pica turnLeft: 60.
pica go: 70.
pica turnLeft: 180.
pica go: 70.
pica turnLeft: 180.
pica turnLeft: 60.
```

```
| pica |
pica := Bot new.
6 timesRepeat:
    [pica go: 70.
    pica turnLeft: 180.
    pica go: 70.
    pica turnLeft: 180.
    pica turnLeft: 60]
```
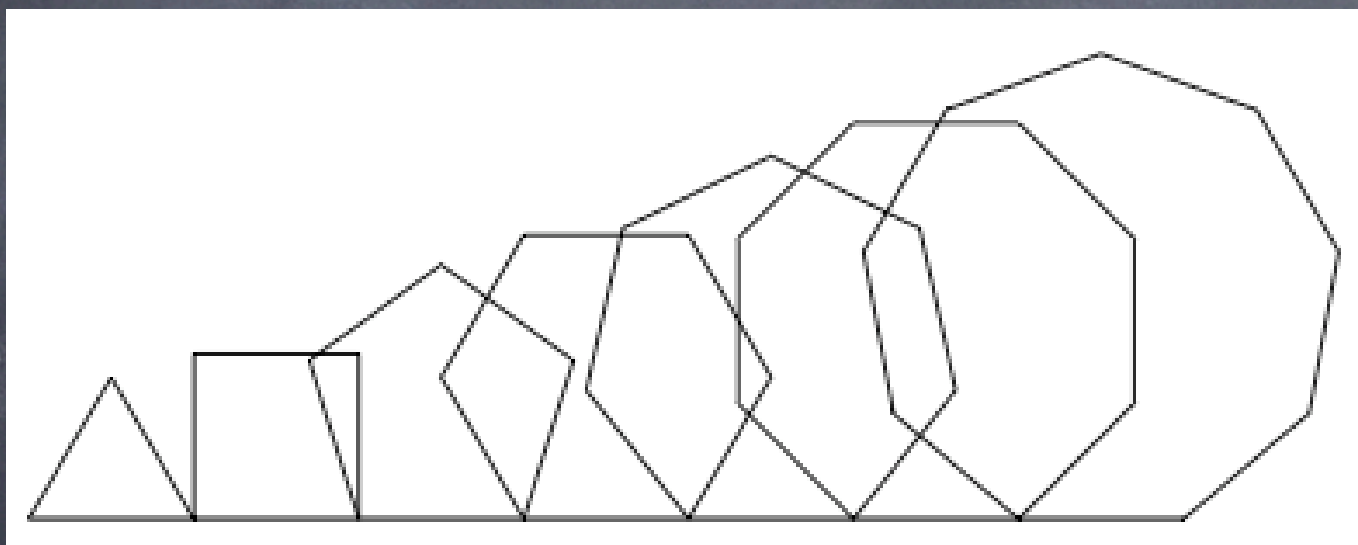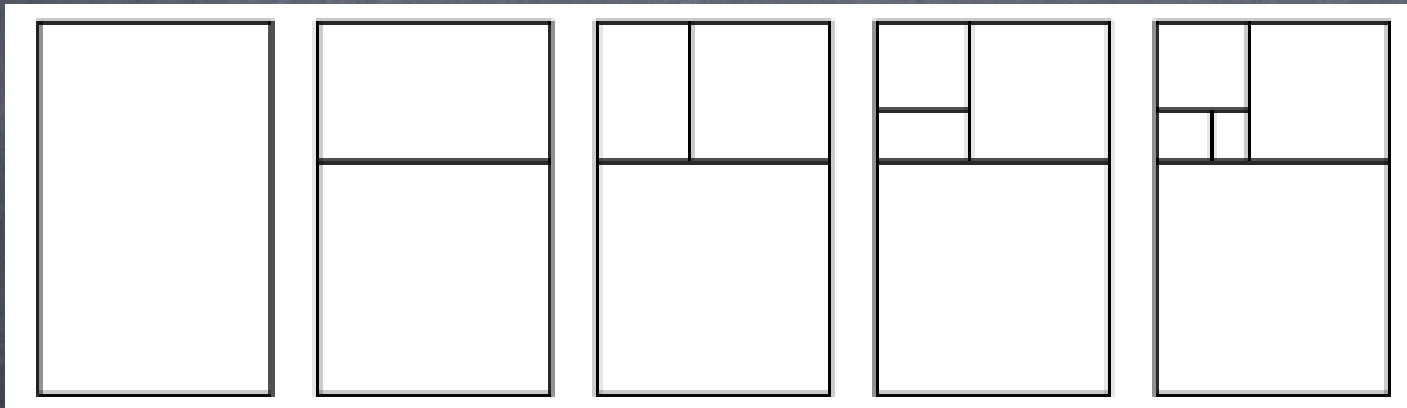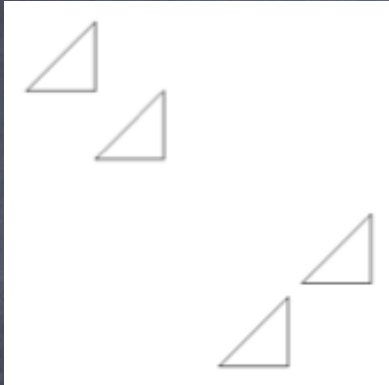
Loops and Variables

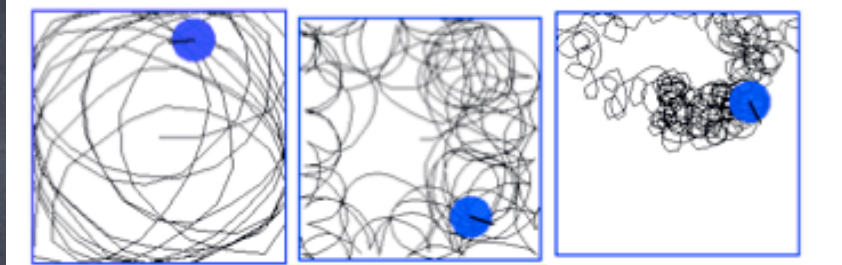# Abstraction and Composition

Arguments

Some Problems

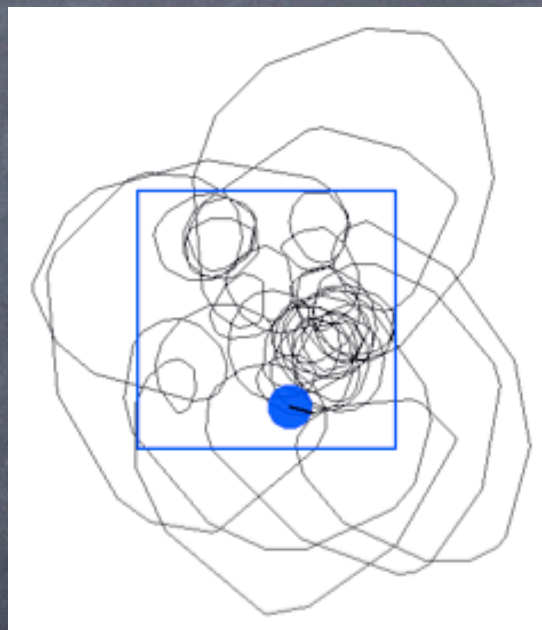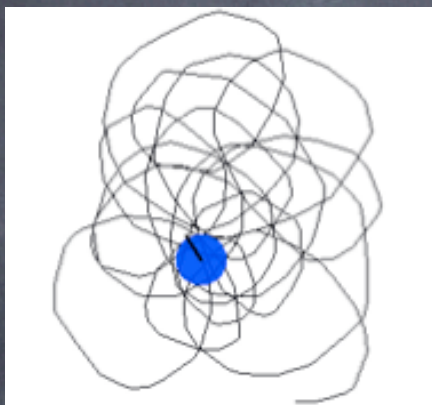# Translation

Bug Life


```
wandering: n
    "Make the robot walking by a random length and turn randomly
    its direction"

    n timesRepeat:
        [self go: 30 atRandom.
        self turnLeft: 30 atRandom]
```
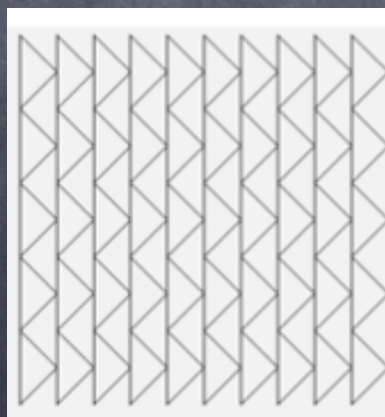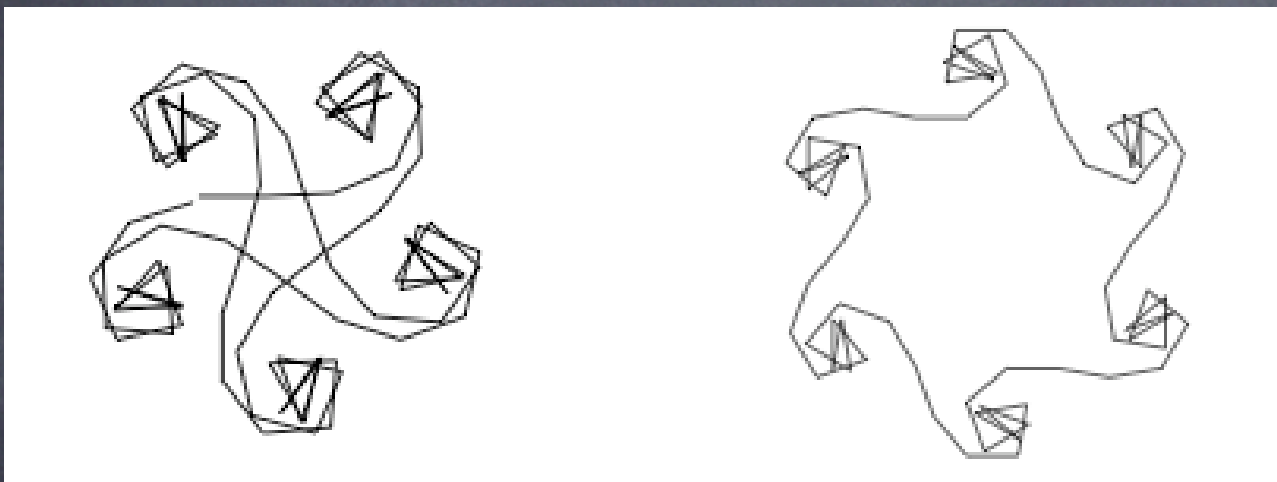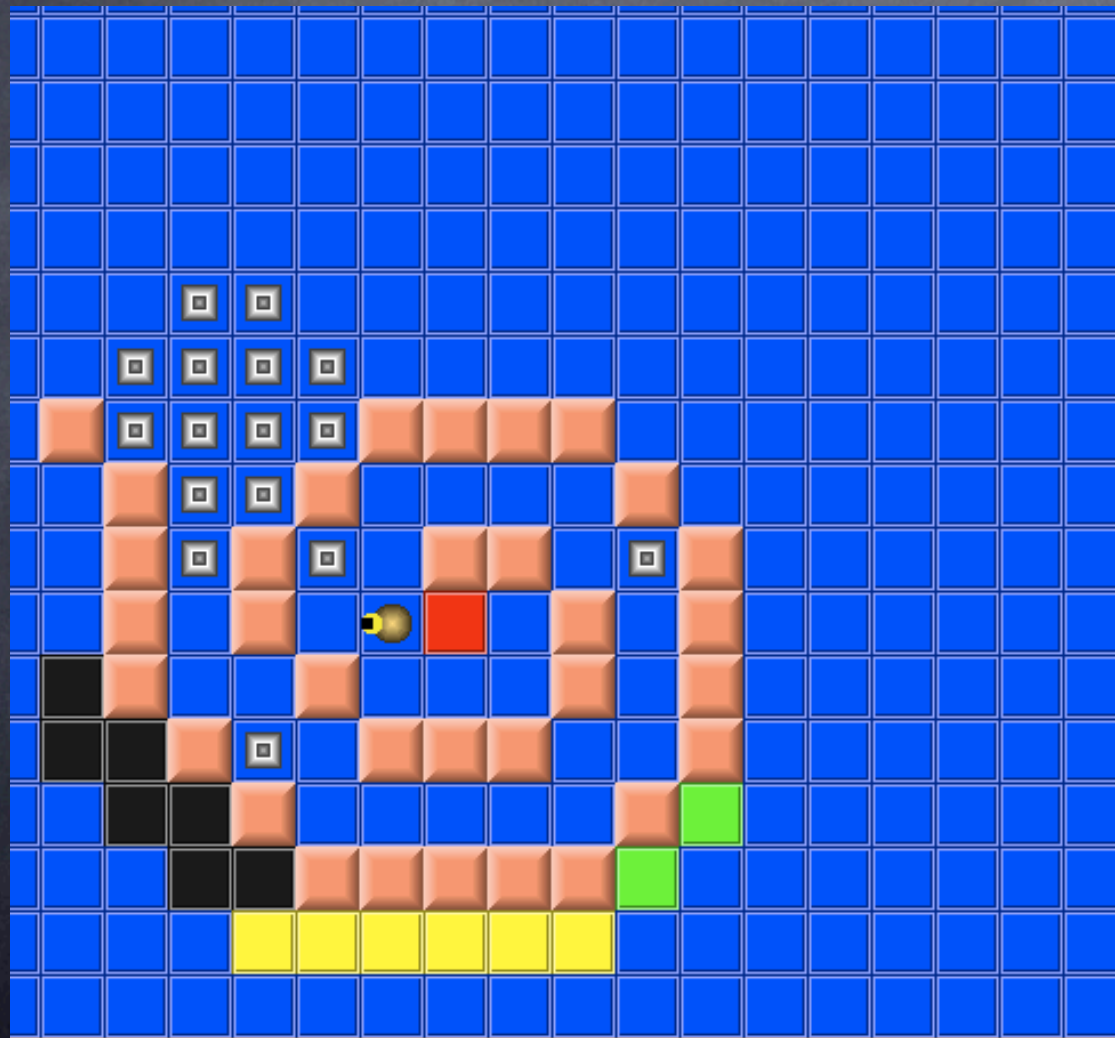
Within a Box

Fun...

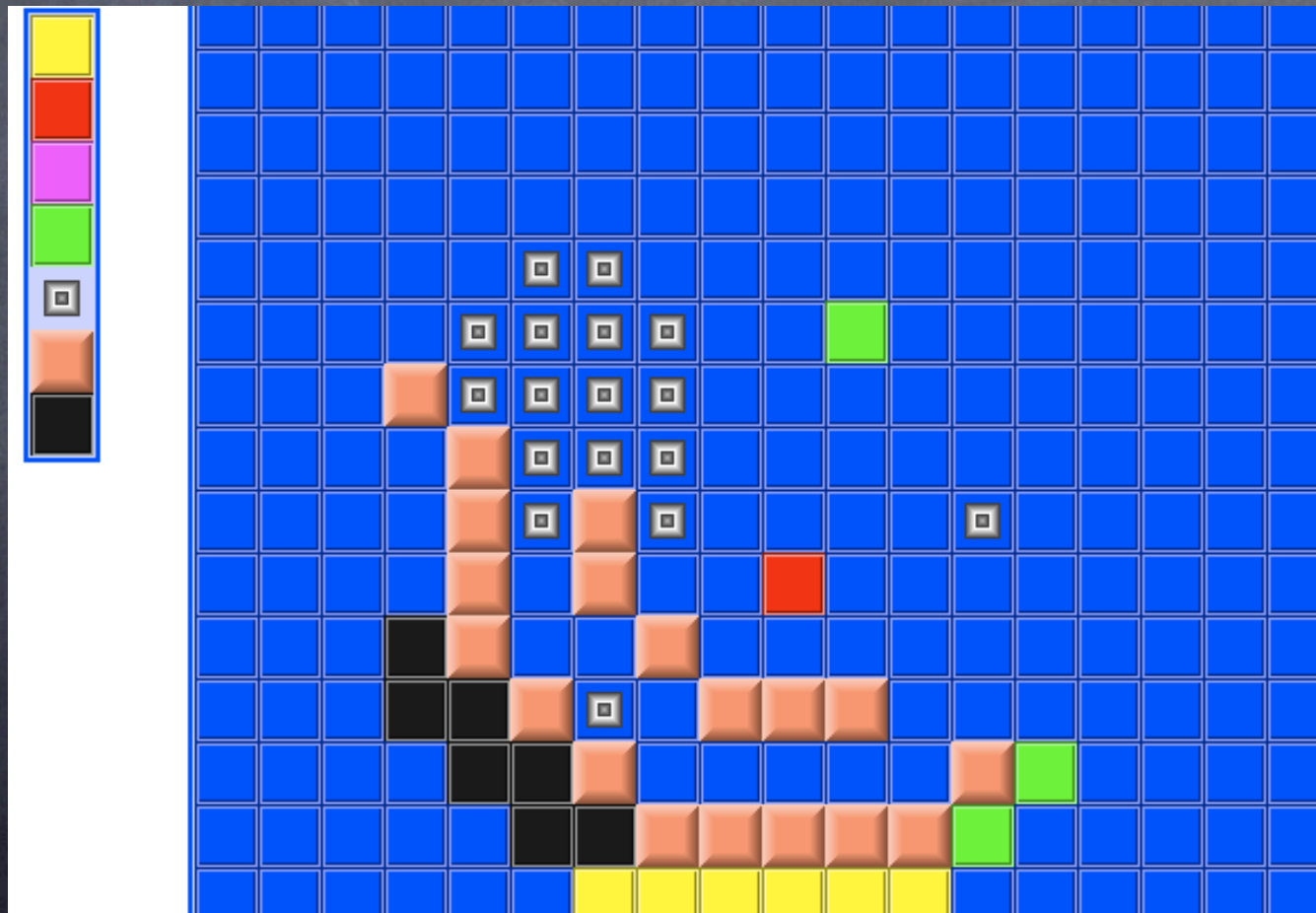# Miner World

Editing the Bot World

Information

- Tested at the French school of Berne

  - 11 to 15 years old

- Two books coming out soon

- Drafts + environment available at:

  - http://kilana.unibe.ch:9090/botinc/