

# **Little Animal Farm**

## **Hodowla zwierzątek**

Gotta Catch 'Em All

masak & tadzik  
YAPC::EU 2011

Not about George Orwell

board game

story

WWII

German occupation

sad times

need sth uplifting



a mathematician

family game

surprisingly deep

all @games.DESTROY;

one set remained (!)

new ones produced







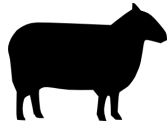
the game rules!

```
method someone_won {
    %!p{${!cp}}{all <rabbit
        sheep
        pig
        cow
        horse>} .Bool
}
```

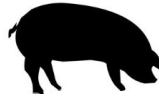
breeding



Rabbit  
Królik



Sheep  
Owca



Pig  
Świnia



Cow  
Krowa



Horse  
Koń

predators



Fox  
Lis



Small dog  
Mały pies



Wolf  
Wilk

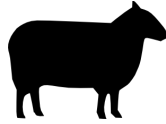
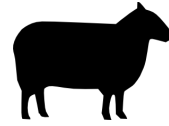


Big dog  
Duży pies

trading



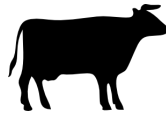
× 6



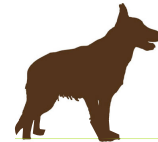
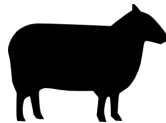
× 2



× 3



× 2





strategy is in trading



we had fun playing this

we had fun writing this

two implementations

one on Niecza

by Stefan O'Rear

one on Rakudo



by masak/tadzik

```

1 class Game {
2     has %!p;           # players (and stock): hash of hashes of animals
3     has &!fd;         # fox die code object
4     has &!wd;         # wolf die code object
5     has @.e;         # event queue: array of hashes representing events
6     has $!cp;        # current player
7     has %!t;         # player trading code objects
8     has %!at;        # player accept trade code objects
9
10    my @animals = <rabbit sheep pig cow horse small_dog big_dog>;
11
12    submethod BUILD(:%!p, :&!fd, :&!wd, :@!e, :$!cp = 'player_1', :%!t, :%!at) {
13        %!p<stock> //= hash @animals Z=> (60, 24, 20, 12, 6, 4, 2);
14        &!fd //= { ('rabbit' xx 6, <sheep pig> xx 2, 'horse', 'fox').roll };
15        &!wd //= { ('rabbit' xx 6, 'sheep' xx 3, 'pig', 'cow', 'wolf').roll };
16    }
17
18    sub enough_animals(%player, %to_trade) {
19        !grep { %to_trade{$_} > (%player{$_} // 0) }, %to_trade.keys;
20    }
21
22    sub trunc_animals(%player, %to_trade) {
23        hash map {; $_ => +%to_trade{$_} min +%player{$_} }, %to_trade.keys;
24    }
25
26    sub worth(%to_trade) {
27        my %value = @animals Z=> (1, 6, 12, 36, 72, 6, 36);

```

~200 lines of code

pluggable



Now

we challenge \*you\*

everyone in this room



to write an AI

it's simple:

```
class Farm::AI::Rabbinator {  
  has Str $!player;  
  method trade(%, @)      { ... }  
  method accept(%, @, $) { ... }  
}
```

```
$ perl6 farm.pl \
ai \
Rabbinator \
JustAnotherPerlFarmer
```

then

next YAPC

we will

announce the winner



may the best farmer win

-Ofun

<http://github.com/masak/farm>