Per Bernhardt

Cluemate

Agenda

- Was ist Cluemate
- Programmaufbau
  - Hauptschleife
  - Model
  - Views
  - Actions
- Ausblick

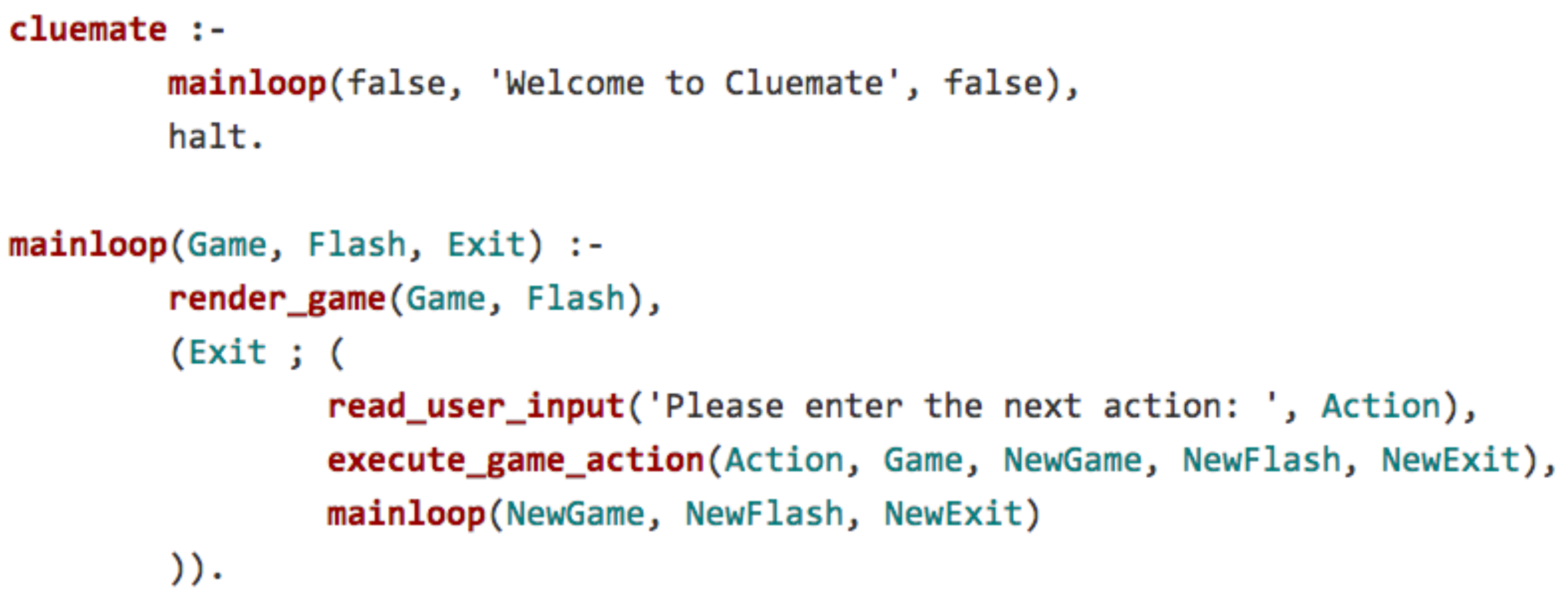
Was ist Cluemate?

- Hilft beim Spielen von Cluedo
- In SWI-Prolog geschrieben => Logische Programmierung
- Open Source
- Iterative Entwicklung => Lauffähige Version nach jeder Iteration

Programmaufbau

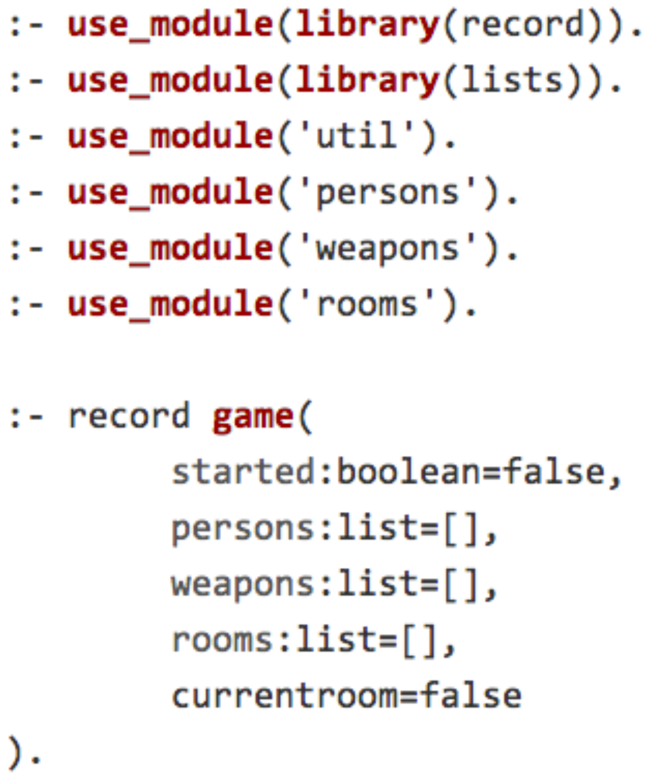
• Startdatei	cluemate
• Hauptschleife	src/cluemate.pl
• Model	src/model/*.pl
• Views	src/views/*.pl
• Actions	src/actions/*.pl

Hauptschleife



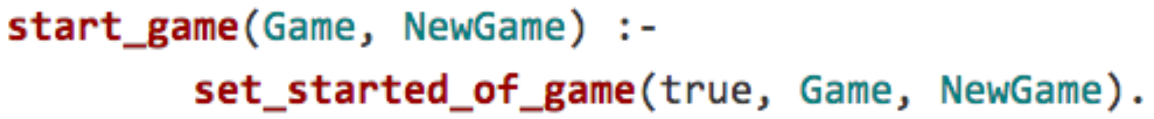
```
cluemate :-
        mainloop(false, 'Welcome to Cluemate', false),
        halt.

mainloop(Game, Flash, Exit) :-
        render_game(Game, Flash),
        (Exit ; (
                read_user_input('Please enter the next action: ', Action),
                execute_game_action(Action, Game, NewGame, NewFlash, NewExit),
                mainloop(NewGame, NewFlash, NewExit)
        )).
```

Model



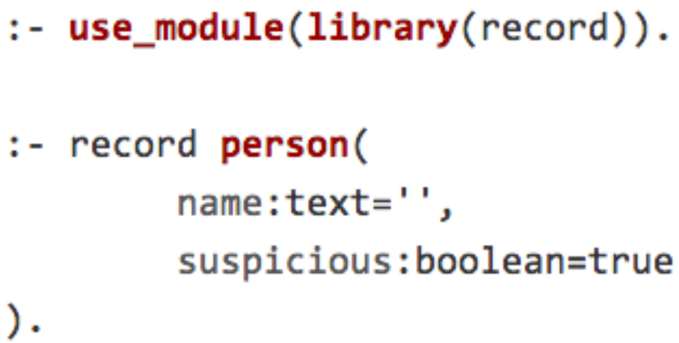
```
:- use_module(library(record)).
:- use_module(library(lists)).
:- use_module('util').
:- use_module('persons').
:- use_module('weapons').
:- use_module('rooms').

:- record game(
        started:boolean=false,
        persons:list=[],
        weapons:list=[],
        rooms:list=[],
        currentroom=false
).
```

Model



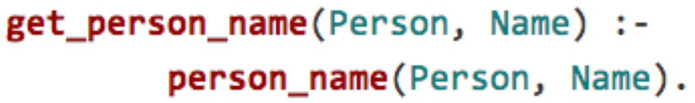
```
start_game(Game, NewGame) :-
        set_started_of_game(true, Game, NewGame).
```

Model



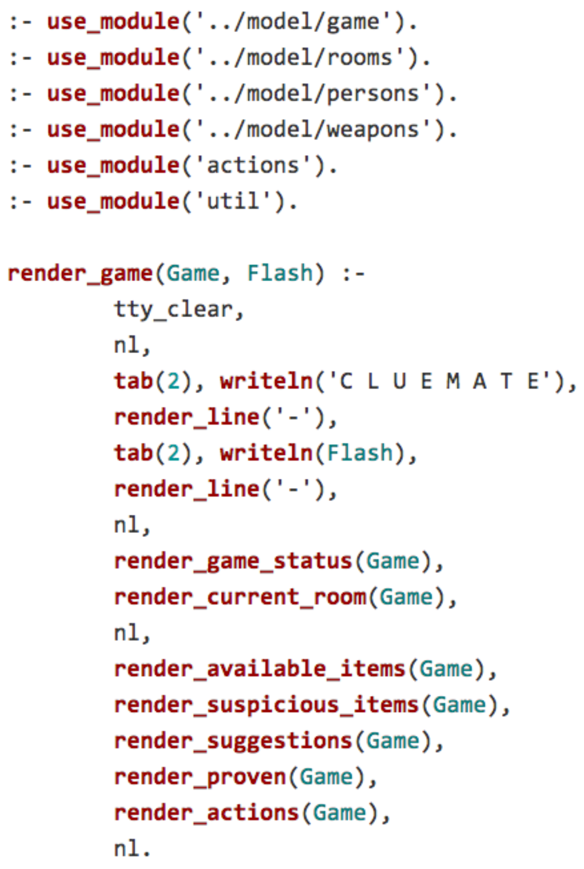
```
:- use_module(library(record)).

:- record person(
        name:text='',
        suspicious:boolean=true
).
```

Model



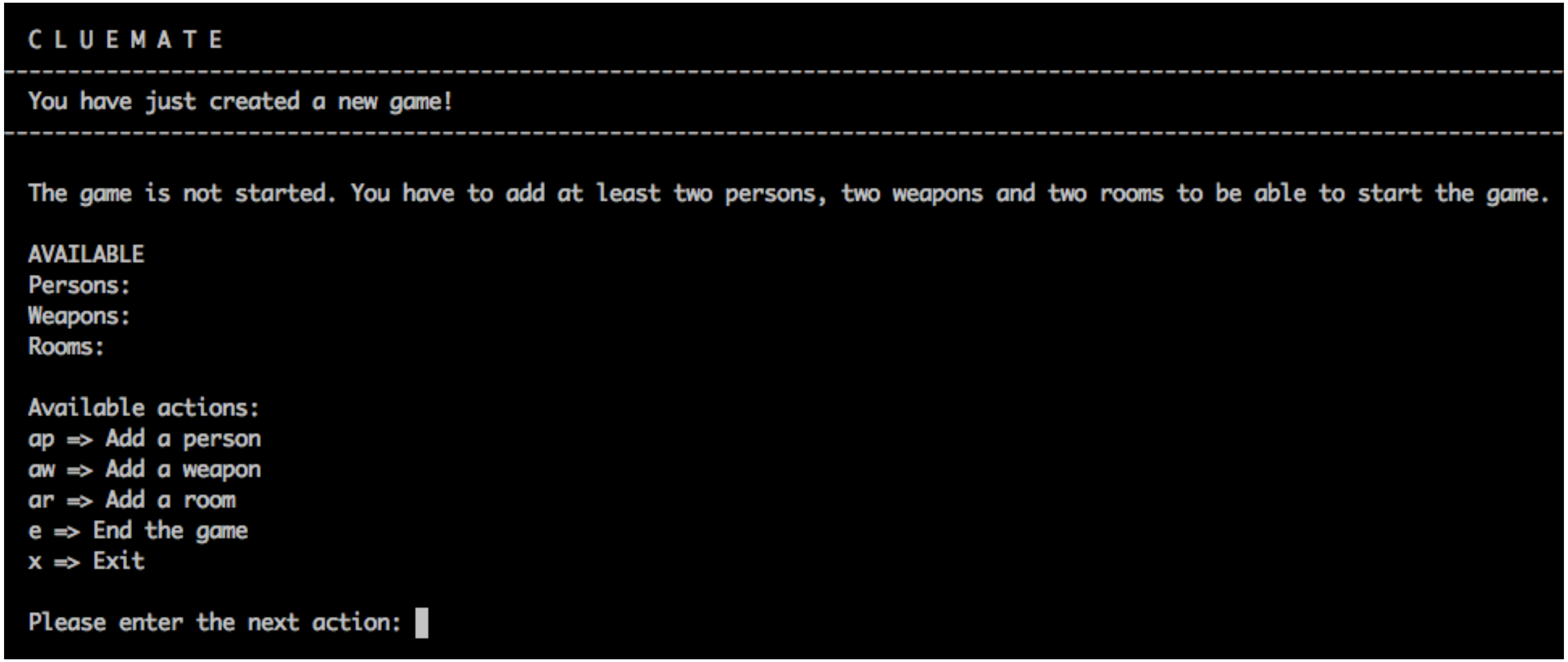
```
get_person_name(Person, Name) :-
        person_name(Person, Name).
```

View



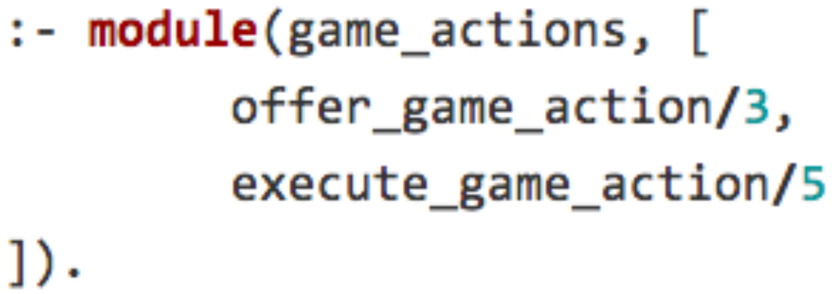
```
:- use_module('../model/game').
:- use_module('../model/rooms').
:- use_module('../model/persons').
:- use_module('../model/weapons').
:- use_module('actions').
:- use_module('util').

render_game(Game, Flash) :-
        tty_clear,
        nl,
        tab(2), writeln('C L U E M A T E'),
        render_line('-'),
        tab(2), writeln(Flash),
        render_line('-'),
        nl,
        render_game_status(Game),
        render_current_room(Game),
        nl,
        render_available_items(Game),
        render_suspicious_items(Game),
        render_suggestions(Game),
        render_proven(Game),
        render_actions(Game),
        nl.
```

View



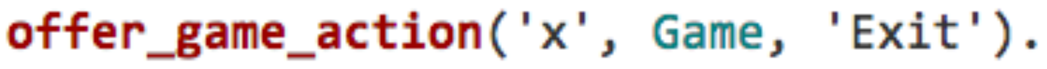
```
CLUEMATE
--------------------------------------------------------------------------------------------------------
You have just created a new game!
--------------------------------------------------------------------------------------------------------

The game is not started. You have to add at least two persons, two weapons and two rooms to be able to start the game.

AVAILABLE
Persons:
Weapons:
Rooms:

Available actions:
ap => Add a person
aw => Add a weapon
ar => Add a room
e => End the game
x => Exit

Please enter the next action:
```

Actions



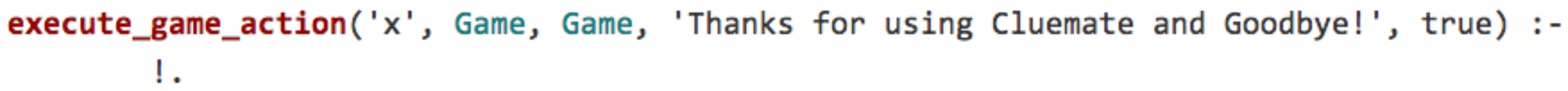
```
:- module(game_actions, [
        offer_game_action/3,
        execute_game_action/5
]).
```

Actions



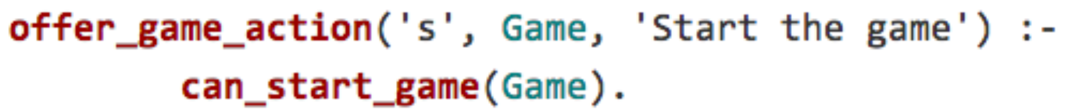
```
offer_game_action('x', Game, 'Exit').
```

Actions



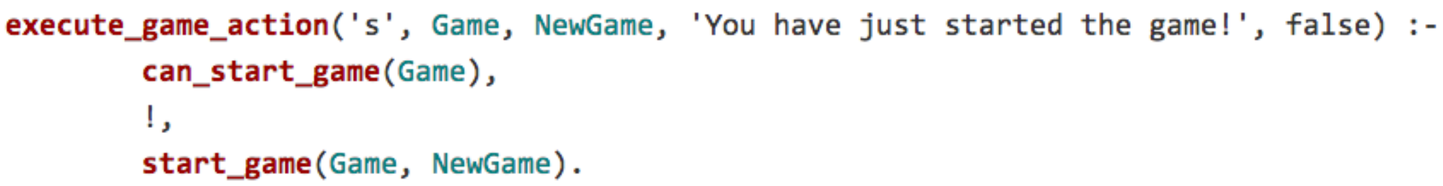
```
execute_game_action('x', Game, Game, 'Thanks for using Cluemate and Goodbye!', true) :-
        !.
```

Actions



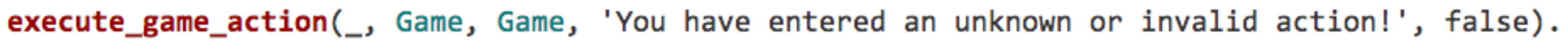
```
offer_game_action('s', Game, 'Start the game') :-
        can_start_game(Game).
```

Actions



```
execute_game_action('s', Game, NewGame, 'You have just started the game!', false) :-
        can_start_game(Game),
        !,
        start_game(Game, NewGame).
```

Actions



```
execute_game_action(_, Game, Game, 'You have entered an unknown or invalid action!', false).
```

Ausblick

- Bessere Benutzereingabe
- Erfassung von tatsächlichen Spielern und Sitzpositionen
- Erfassung gestellter Fragen
- Anzeige eines Spielbretts
- Erfassung der Spielfigurpositionen

Vielen Dank...

- ...für die Aufmerksamkeit!
- Noch Fragen?

- Quellen:
  - http://de.wikipedia.org/wiki/Cluedo
  - https://github.com/perprogramming/cluemate/