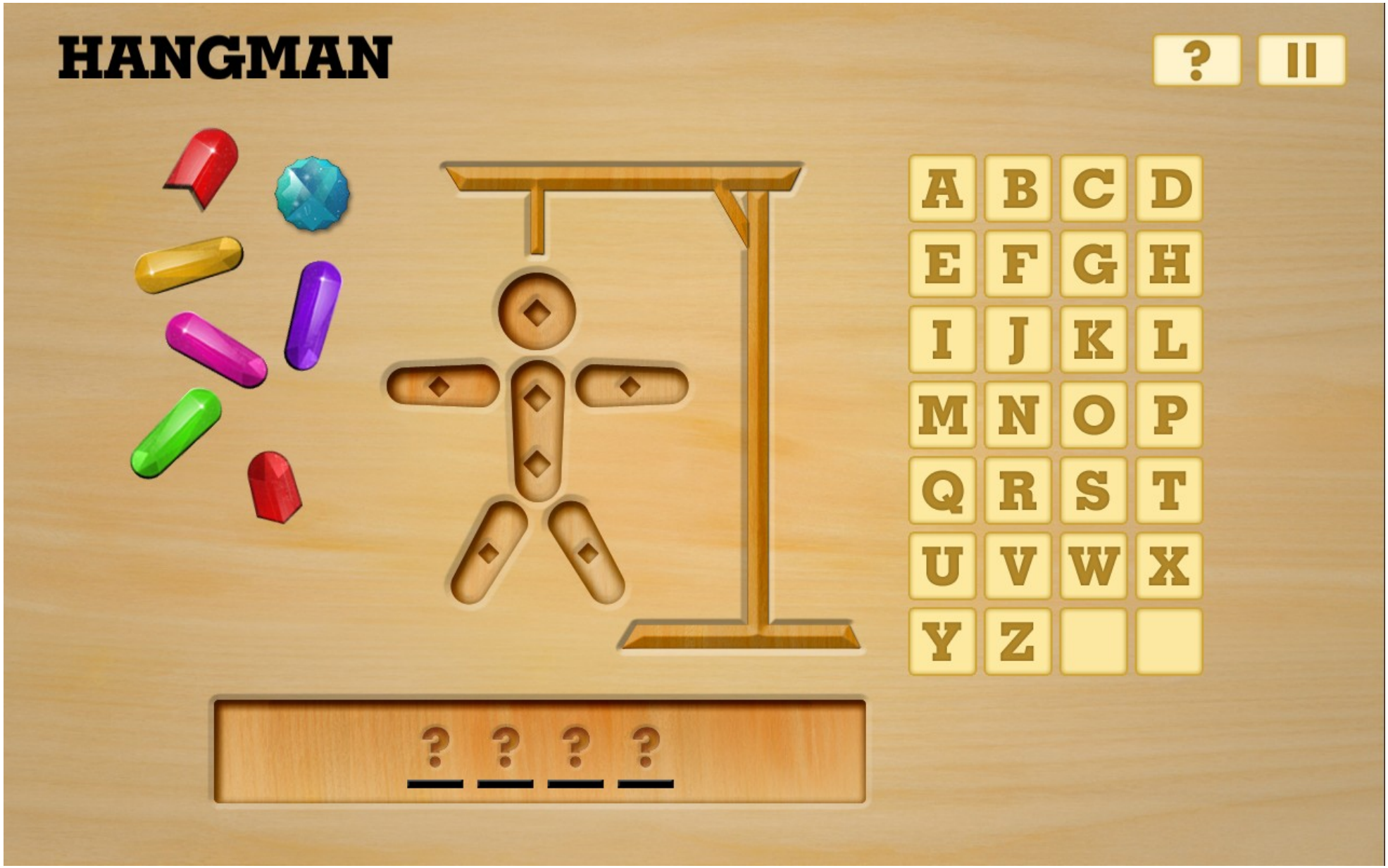
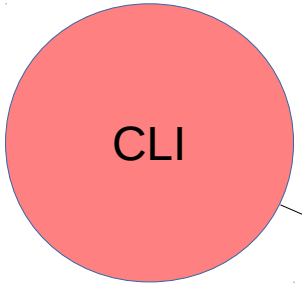
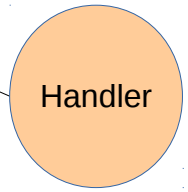


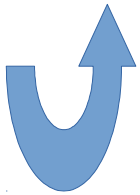
Bibek Pandey - Elixir Hangman Portfolio Deck



--name (player id) --type ("human" or "robot") --random (num random secrets, max 1000) [--secret (hangman word(s)) --baseline] [--log --display -timeout] [--parallel (suggested w/40 secrets or more)]

or aliases: -n (player id) -t ("human" or "robot") -r (num random secrets, max 1000) [-s (hangman word(s)) -bl] [-l -d -ti] [-pl]

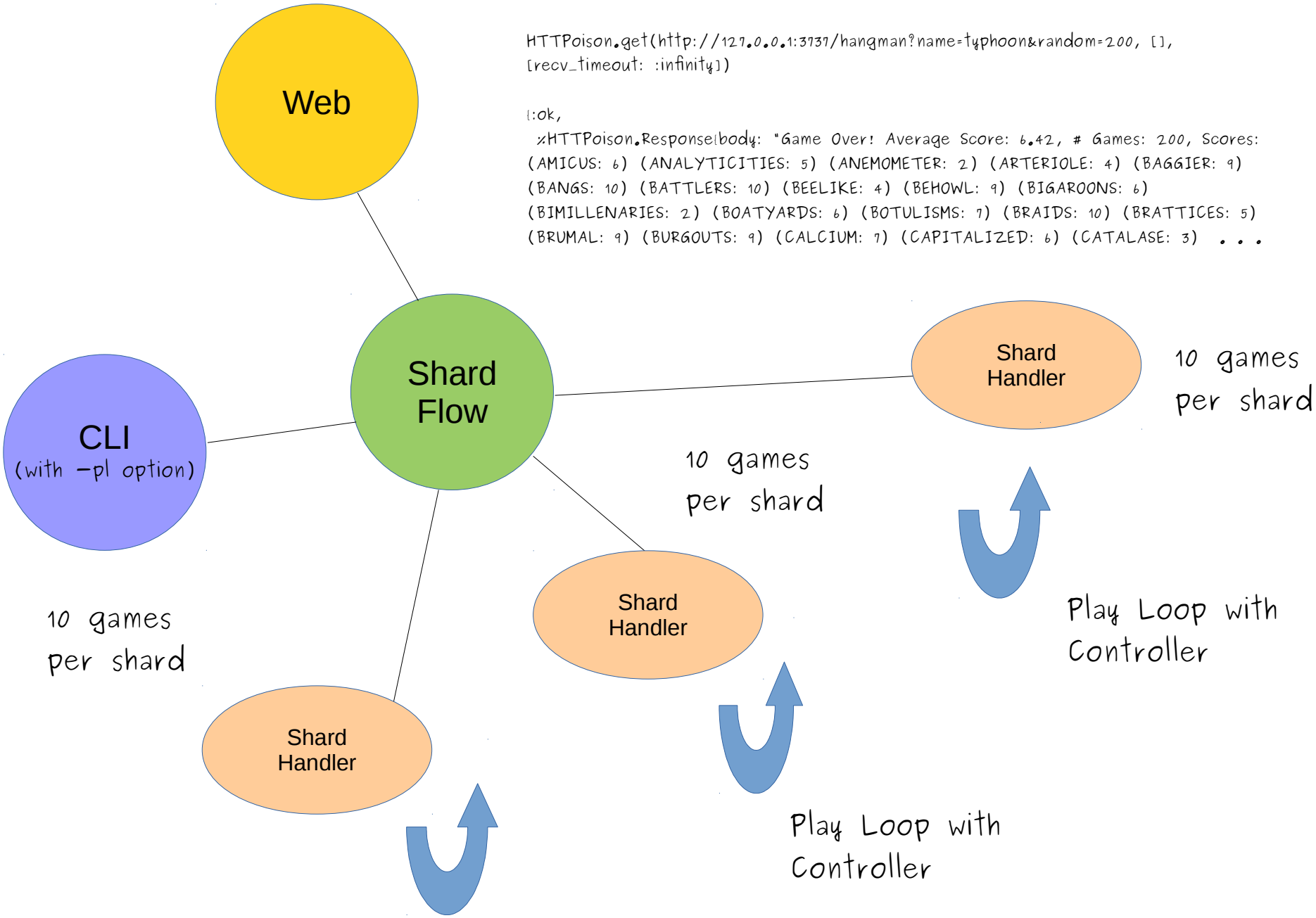


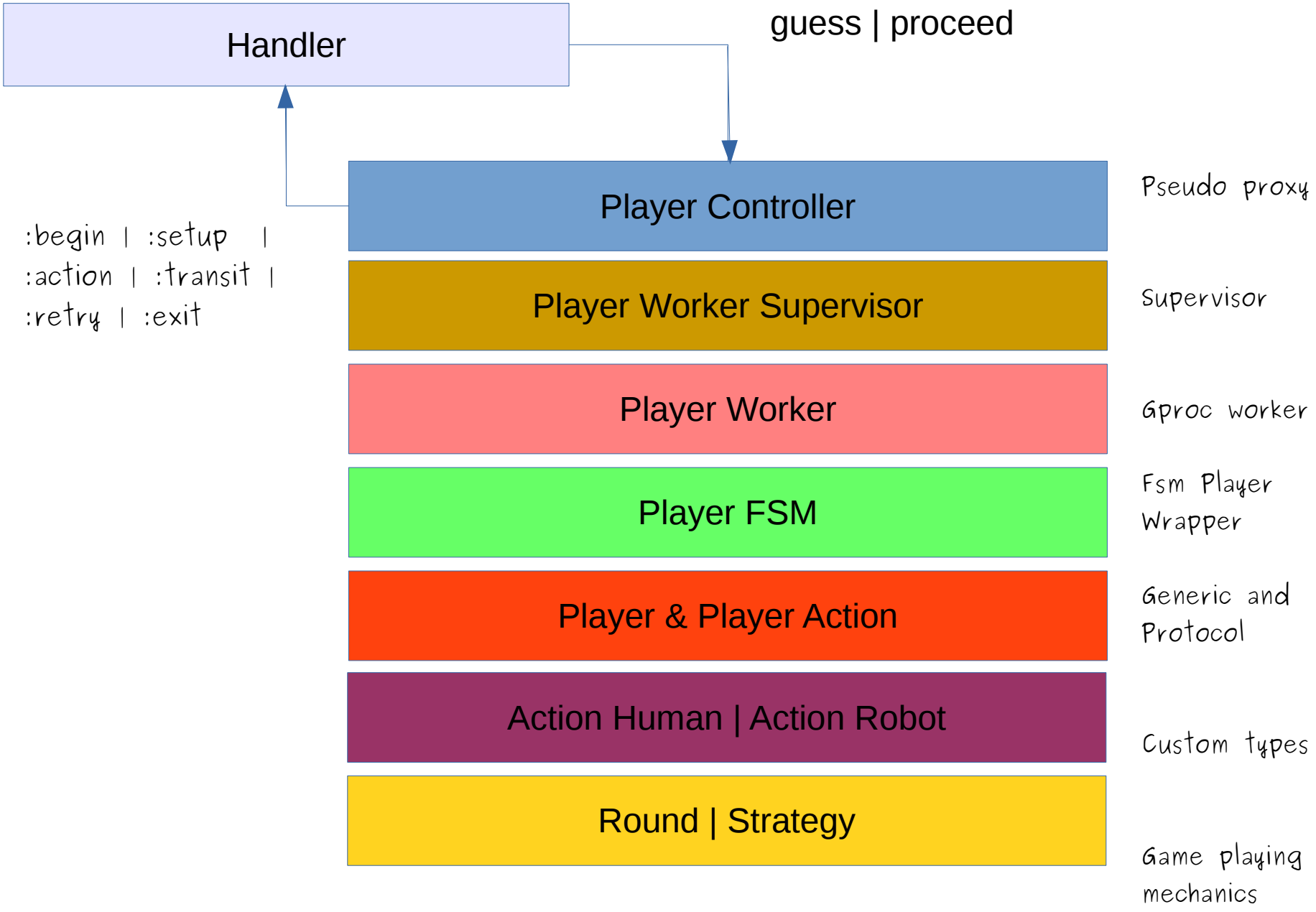


Play Loop with Controller

```
$ mix escript.build
$ ./hangman_game -n martha -t robot -r 1 -d

#martha_feed --> Game 1 has started
#martha_feed Game 1, secret length --> 10
#martha_feed Game 1, letter --> e
#martha_feed Game 1, Round 1, status --> ----------; score=1;
status=KEEP_GUESSING

#martha_feed Game 1, letter --> i
#martha_feed Game 1, Round 2, status --> -----I--I-; score=2;
status=KEEP_GUESSING

#martha_feed Game 1, letter --> s
#martha_feed Game 1, Round 3, status --> -----IS-I-; score=3;
status=KEEP_GUESSING

#martha_feed Game 1, letter --> t
#martha_feed Game 1, Round 4, status --> -----ISTI-; score=4;
status=KEEP_GUESSING

#martha_feed Game 1, letter --> a
#martha_feed Game 1, Round 5, status --> ---A-ISTI-; score=5;
status=KEEP_GUESSING

#martha_feed Game 1, letter --> r
#martha_feed Game 1, Round 6, status --> ---A-ISTI-; score=6;
status=KEEP_GUESSING

#martha_feed Game 1, letter --> d
#martha_feed Game 1, Round 7, status --> D--A-ISTI-; score=7;
status=KEEP_GUESSING

#martha_feed Game 1, word --> dynamistic
#martha_feed Game 1, Round 8, status --> DYNAMISTIC; score=7; status=GAME_WON

#martha_feed Game Over!! --> Game Over! Average Score: 7.0, # Games: 1, Scores:
 (DYNAMISTIC: 7)
```

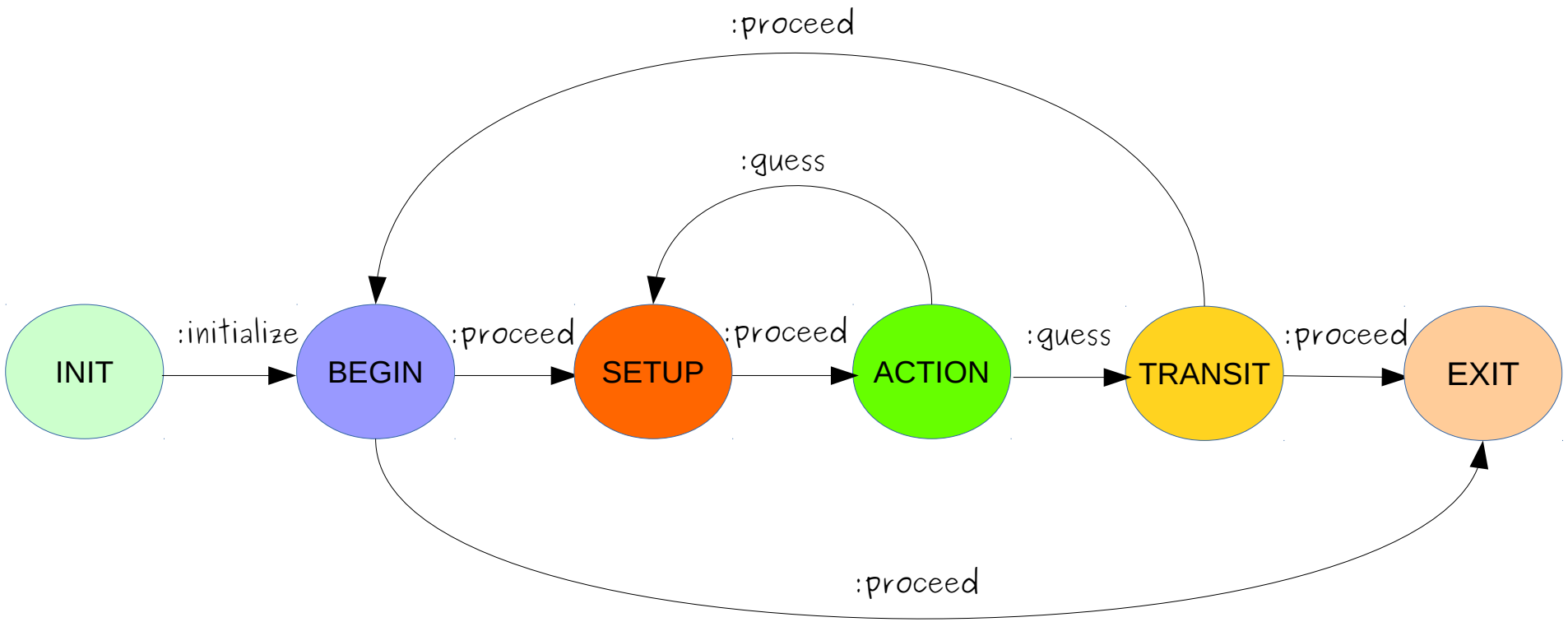
Hangman Command Line


Web
HTTPoison.get(http://127.0.0.1:3737/hangman?name=typhoon&random=200, [], [recv_timeout: :infinity])
{:ok,
%HTTPoison.Response{body: "Game Over! Average Score: 6.42, # Games: 200, Scores:
(AMICUS: 6) (ANALYTICITIES: 5) (ANEMOMETER: 2) (ARTERIOLE: 4) (BAGGIER: 9)
(BANGS: 10) (BATTLERS: 10) (BEELIKE: 4) (BEHOWL: 9) (BIGAROONS: 6)
(BIMILLENARIES: 2) (BOATYARDS: 6) (BOTULISMS: 7) (BRAIDS: 10) (BRATTICES: 5)
(BRUMAL: 9) (BURGOUTS: 9) (CALCIUM: 7) (CAPITALIZED: 6) (CATALASE: 3) . . .
Shard Flow
CLI
(with -pl option)
Shard Handler
10 games per shard
Shard Handler
10 games per shard
Play Loop with Controller
Shard Handler
10 games per shard
Play Loop with Controller
Play Loop with Controller
HTTPoison.get http://127.0.0.1:3737/hangman?name=typhoon&secret[]=eel&secret[]=porcupine
Parallel Hangman

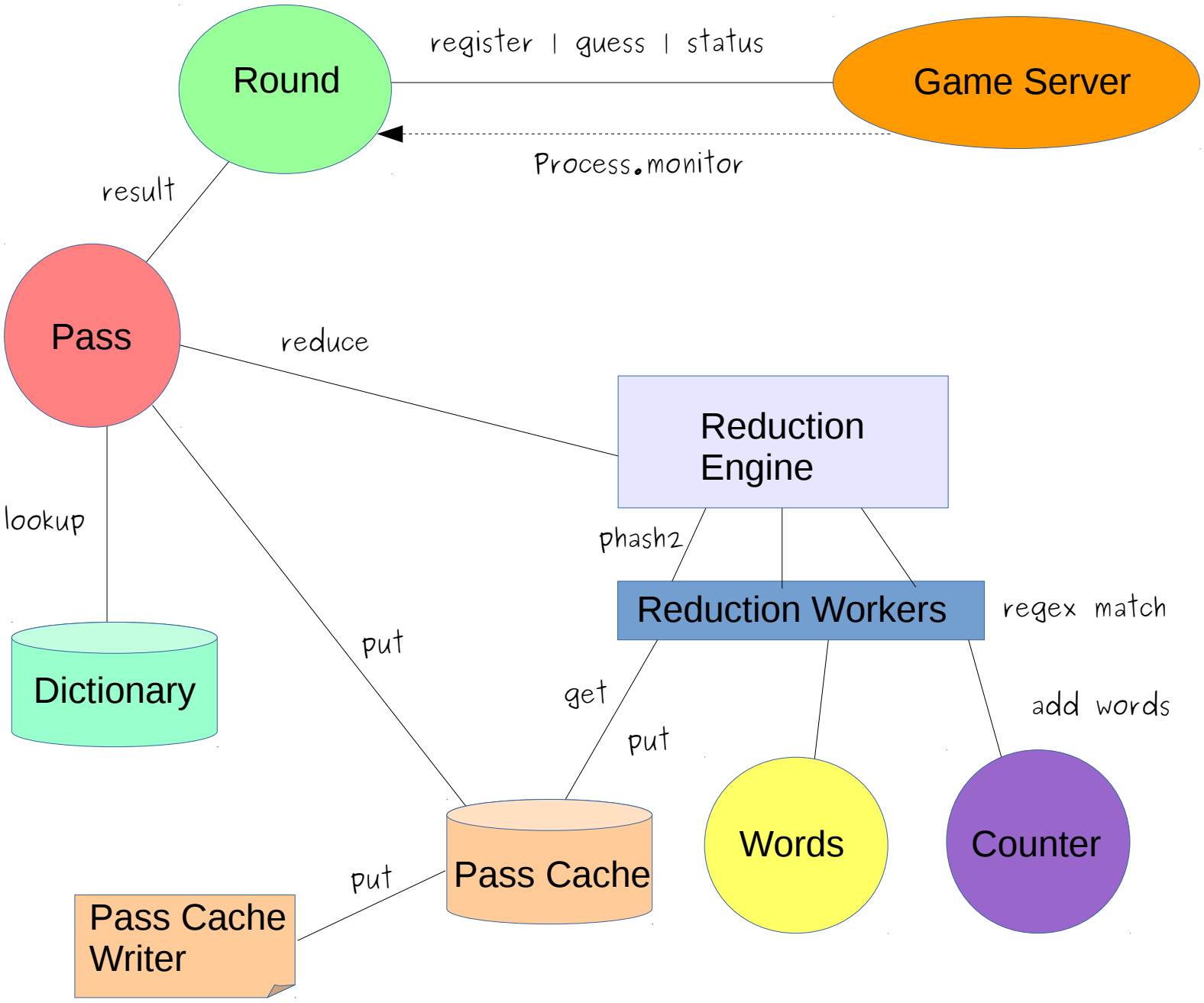


Player Abstraction Stack

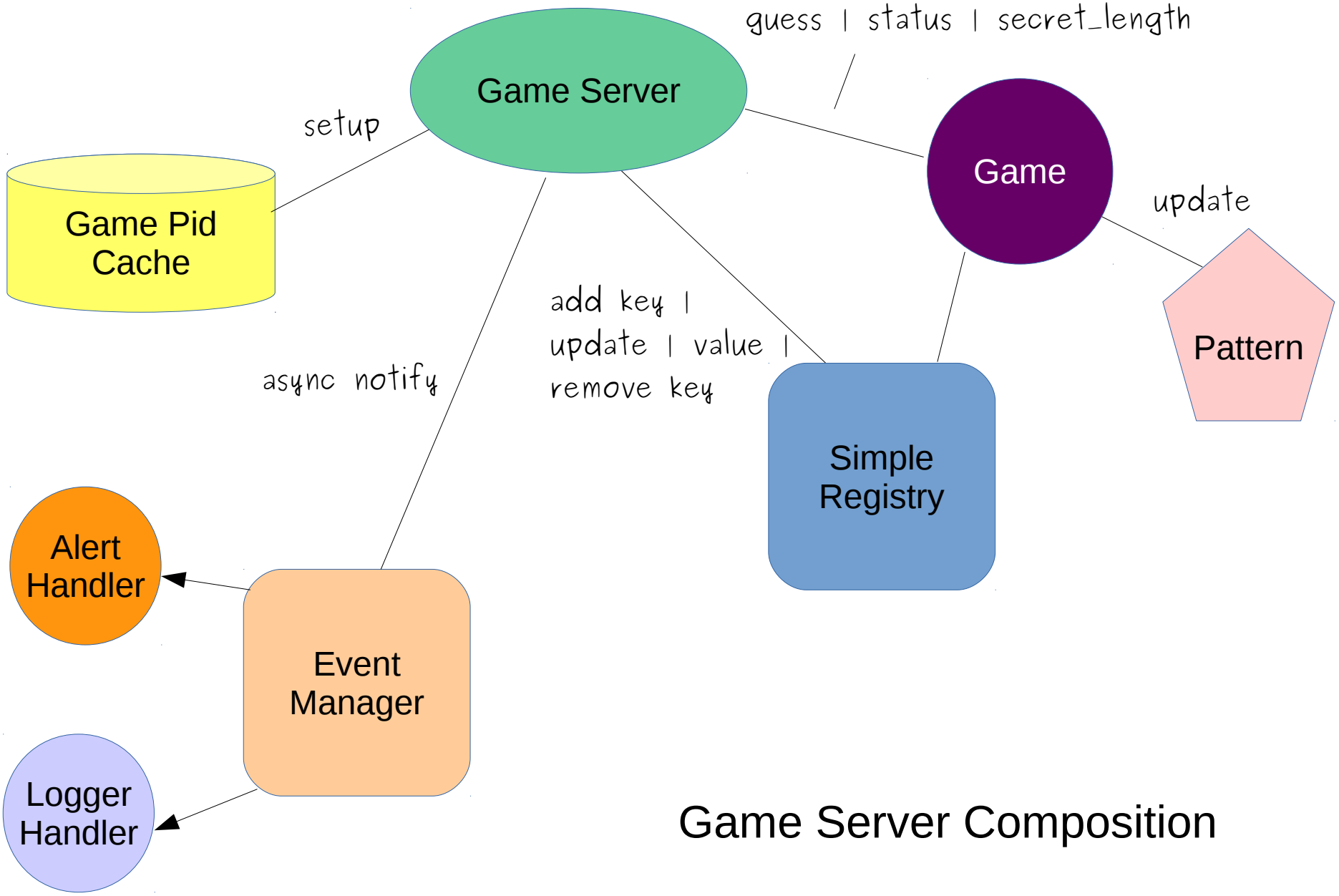
Player Finite State Machine Flow



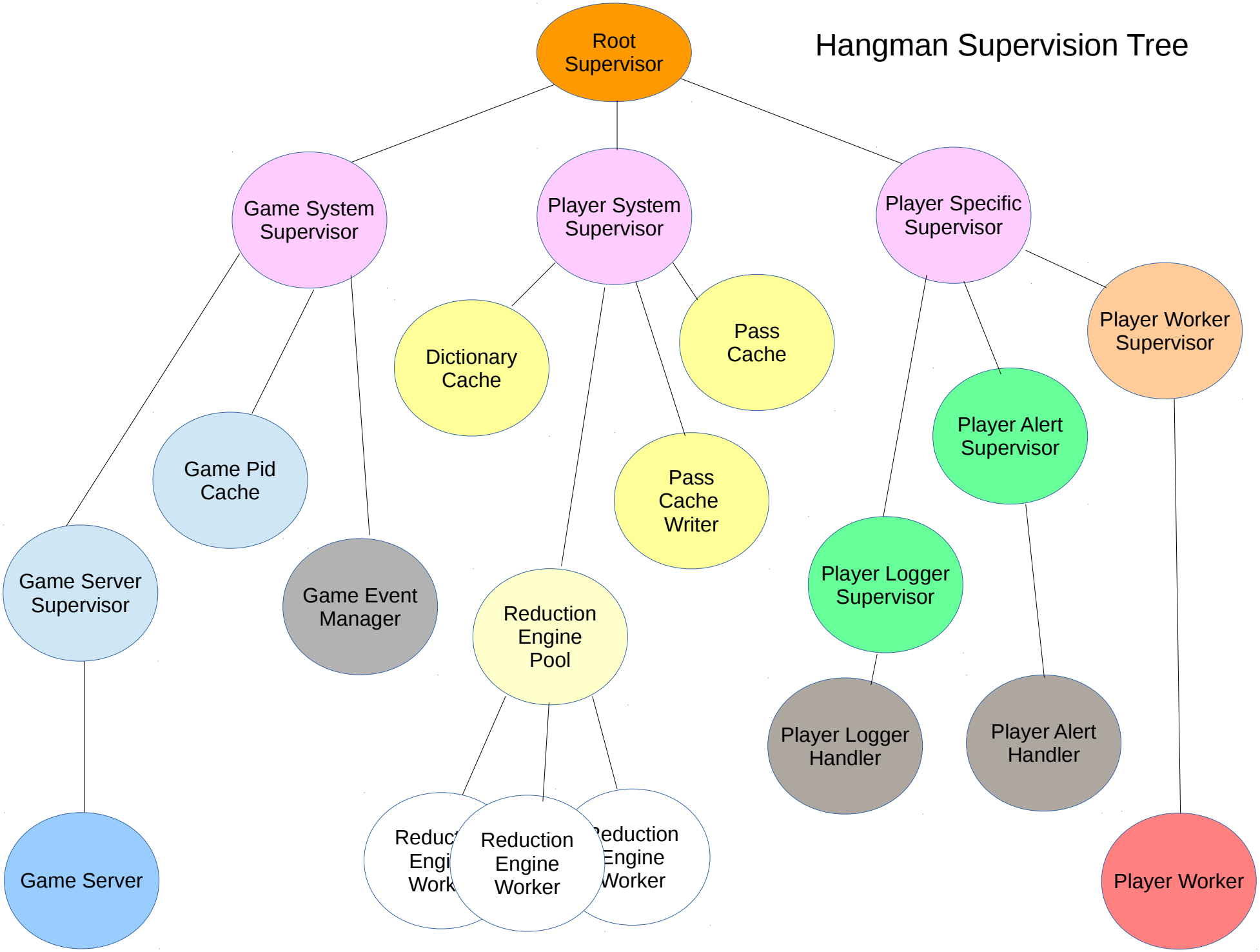
init - Start state
begin - Start new game, if previous game is :abort and no games left → :exit
setup - Setup round guess, if :human ask for letter input
action - Perform guess, if more rounds left go back to :setup else :transit
transit - Single game over, start new game or exit if all games finished
exit - Games over!



Player System Interaction



Game Server Composition


Hangman Supervision Tree
Root Supervisor
Game System Supervisor
Player System Supervisor
Player Specific Supervisor
Dictionary Cache
Pass Cache
Player Worker Supervisor
Game Pid Cache
Player Alert Supervisor
Pass Cache Writer
Game Server Supervisor
Game Event Manager
Reduction Engine Pool
Player Logger Supervisor
Player Logger Handler
Player Alert Handler
Reduction Engine Worker
Game Server
Player Worker