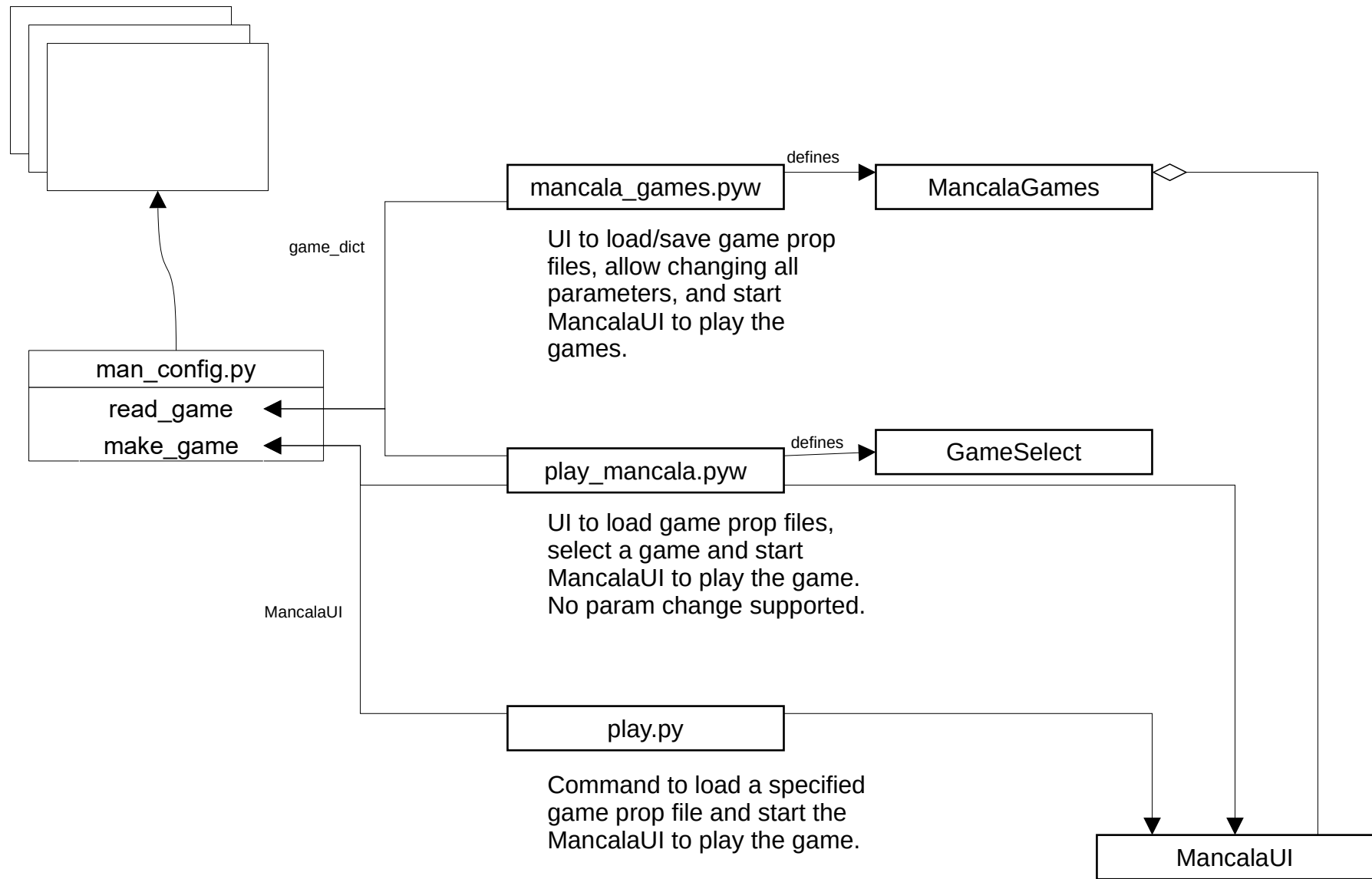
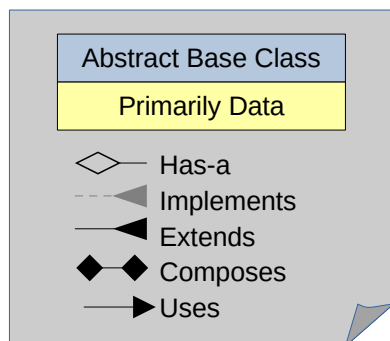
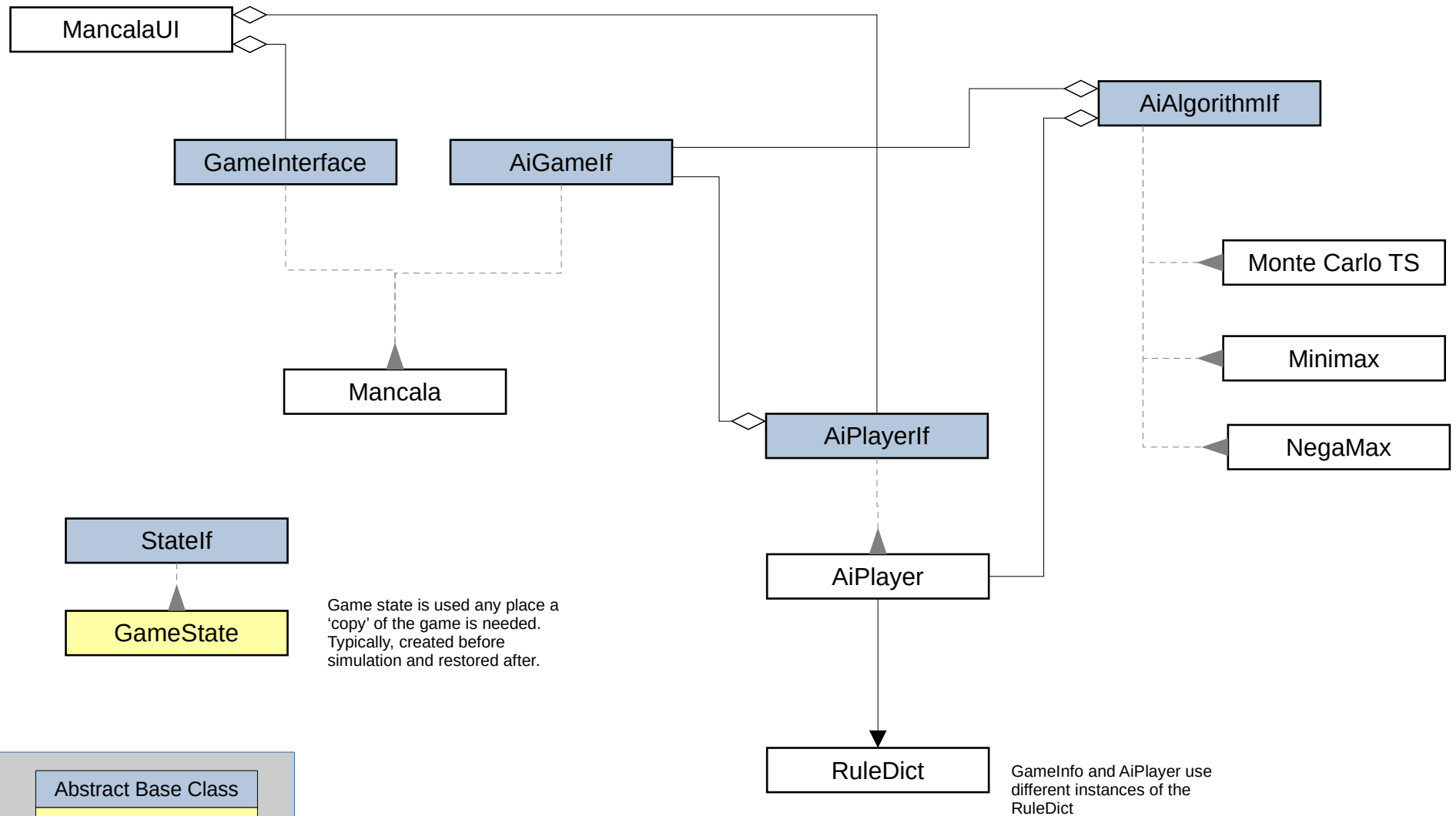


Mancala Games

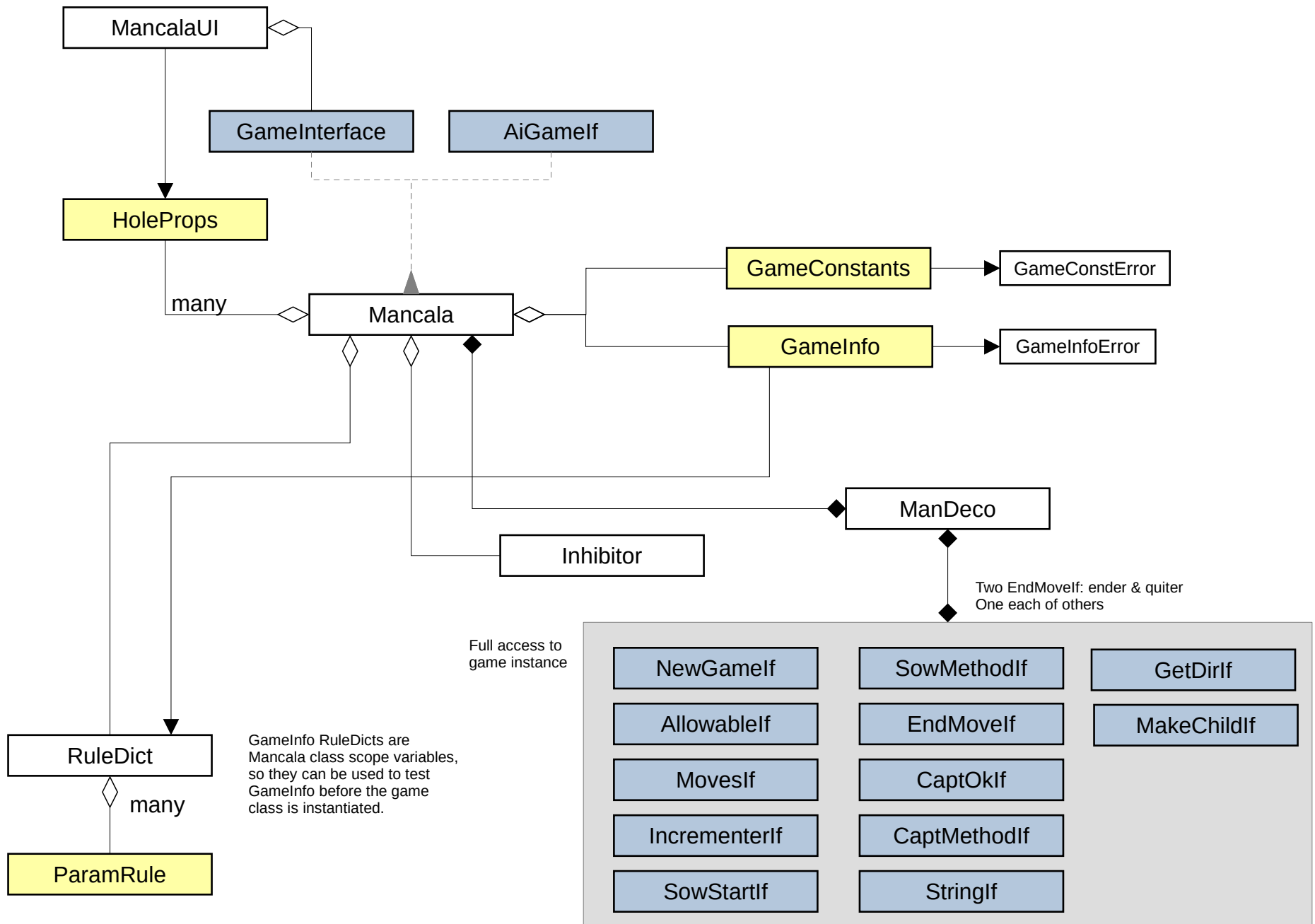
Game Property Files



Mancala UI, Mancala & AI Classes



Mancala Classes



Decorator Usage

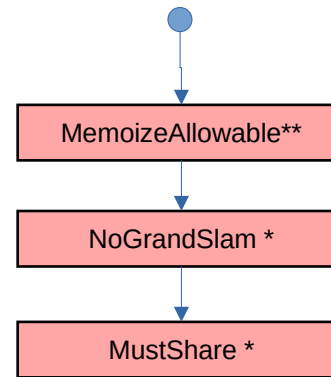
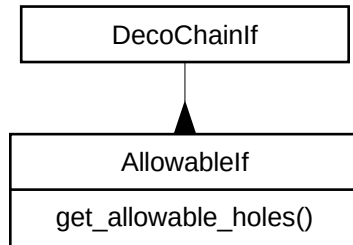
Mancala Move Steps

Mancala Methods (mancala.py)		Description	Decorator(s)
move	do_sow	Start Sow (parse move, first hole, seeds)	sow_start
		Get Direction (CW or CCW)	get_direction
		Sow – drop seeds	sower, capt_ok, incrementer & make_child
	capture_seeds	Capture Seeds	capt_ok, capturer, incrementer & make_child
	win_conditions	Win Condition – is game over	ender

Decorator Calls (non-move)

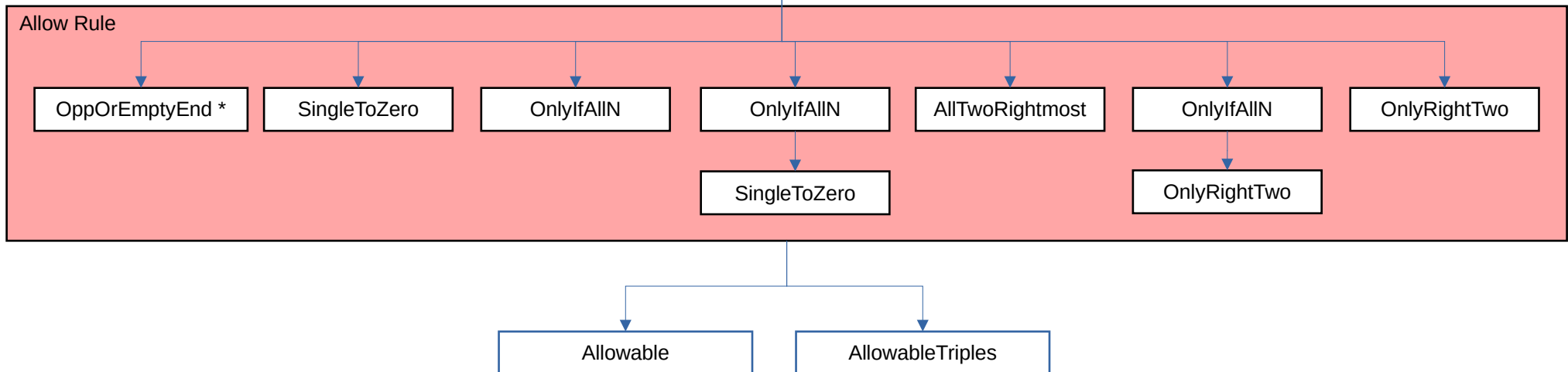
Interface	Method (mancala.py)	Decorator
GameInterface	new_game	new_game
GameInterface	end_game	quitter
GameInterface	get_allowable_holes	allow
AIGameIf	get_moves	get_moves
not applicable	__str__	get_string

Allowables Decorators and Chain



- One path down the deco chain is used.
- Intersecting arrows are decision points.
- Shown in **call order** from start dot (constructed in reverse order). Calls down the deco chain maybe at any point in a deco's processing.
- All paths shown might not be possible (see ginfo_rules).

Optional deco



State variables read:

turn
board
store
blocked
owner
child
mcount

Parameters:

min_move
allow_rule
mlength
mustshare
grandslam

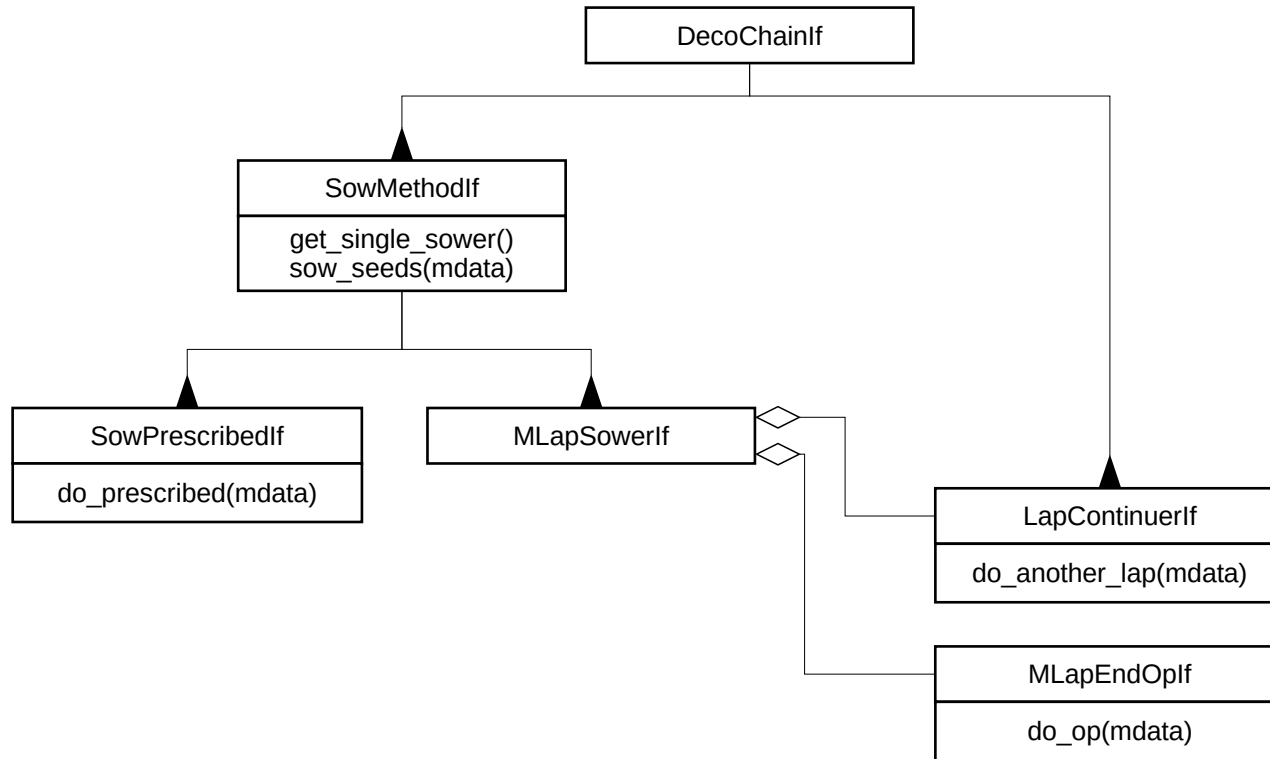
Notes:

Some allow rule decos are shown more than once for clarity.

* Simulates some portion of moves to determine allowables

** MemoizeAllowable is used for deco's that simulate moves

Sower Decorators

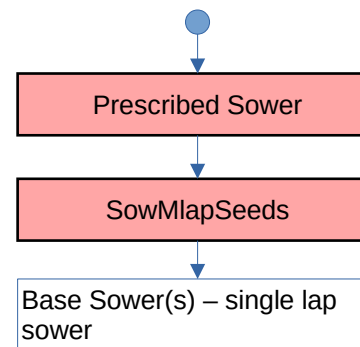


State variables:

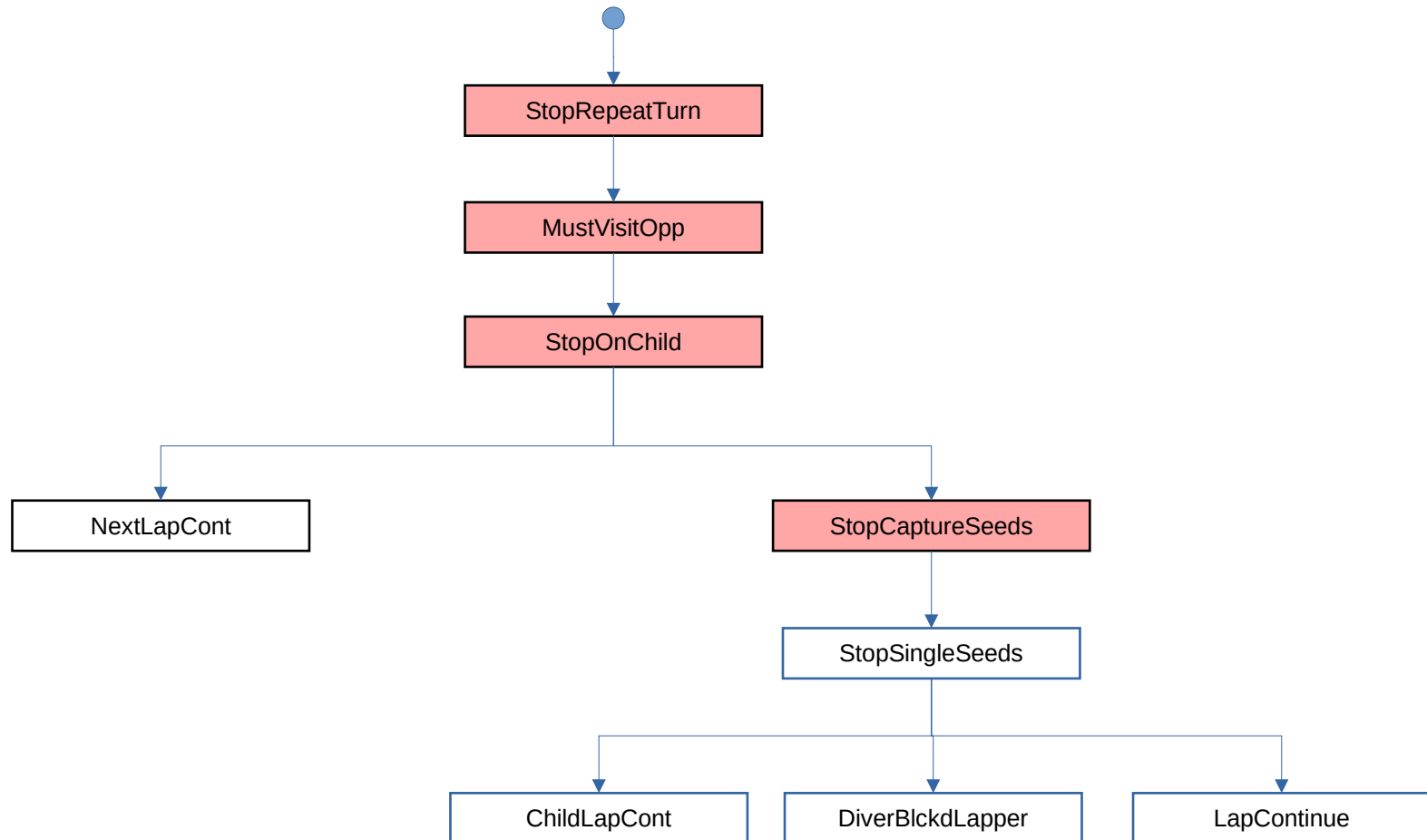
Reads
inhibitor
turn
child
mcount
Changes
board
store
blocked

Parameters:

capt_max
capt_min
capt_on
child_type
crosscapt
evens
goal
gparam_one
mlaps
prescribed
sow_direct
sow_own_store
sow_rule
visit_opp



Lapper Continuer Deco Chain



Captuer Decorators

State variables

Reads

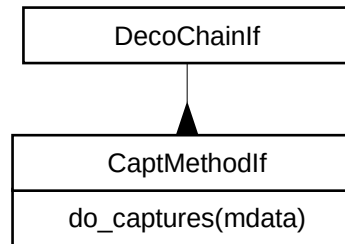
inhibitor
starter
turn

Changes

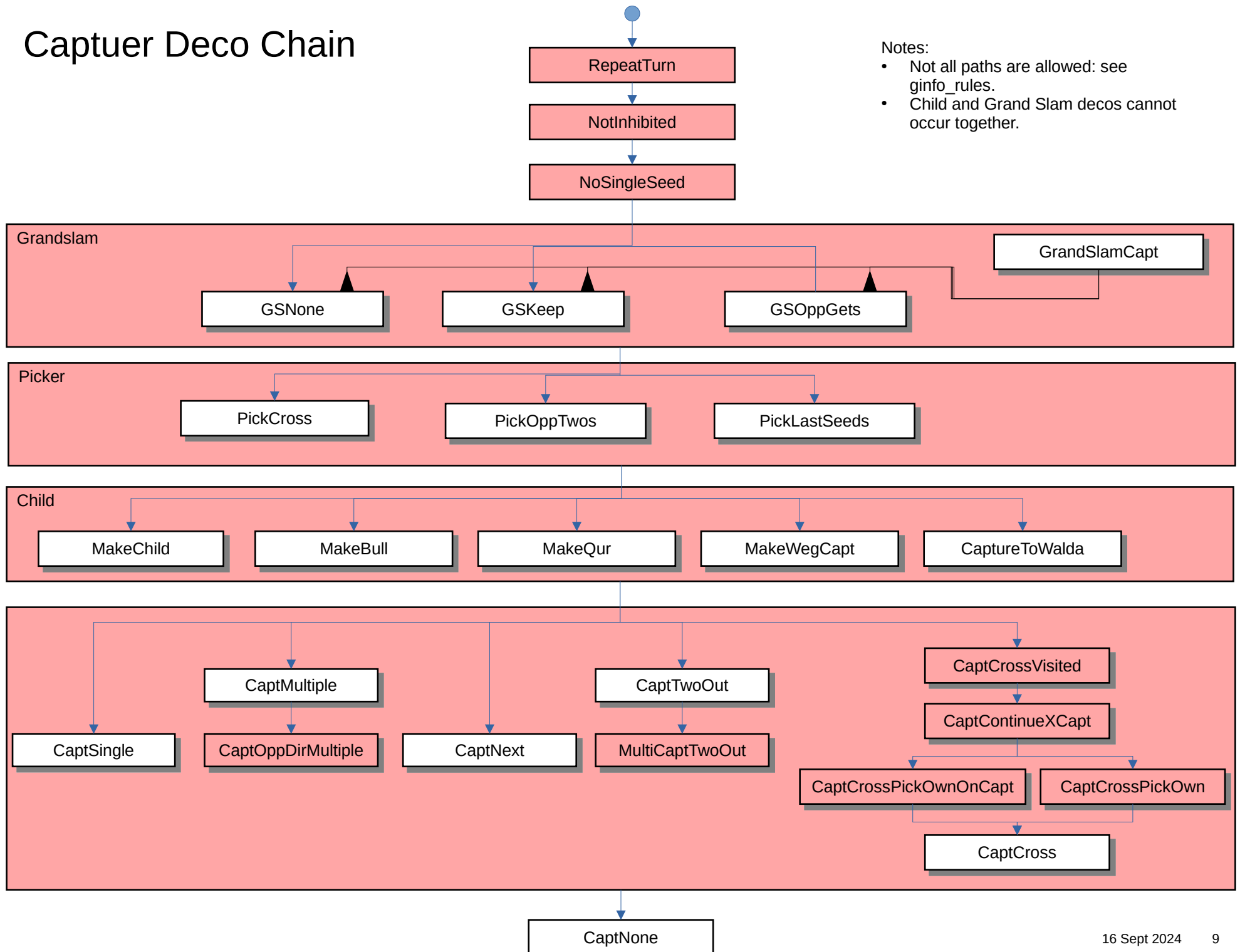
board
child
store

Parameters:

capsamedir
capt_max
capt_min
capt_next
capt_on
capt_rturn
capttwoout
child_cvt
child_type
crosscapt
evens
grandslam
mlaps
multicapt
nocaptfirst
nosinglecapt
oppsidecapt
pickextra
prescribed
round_fill
xc_sown
xcpickown



Captuer Deco Chain



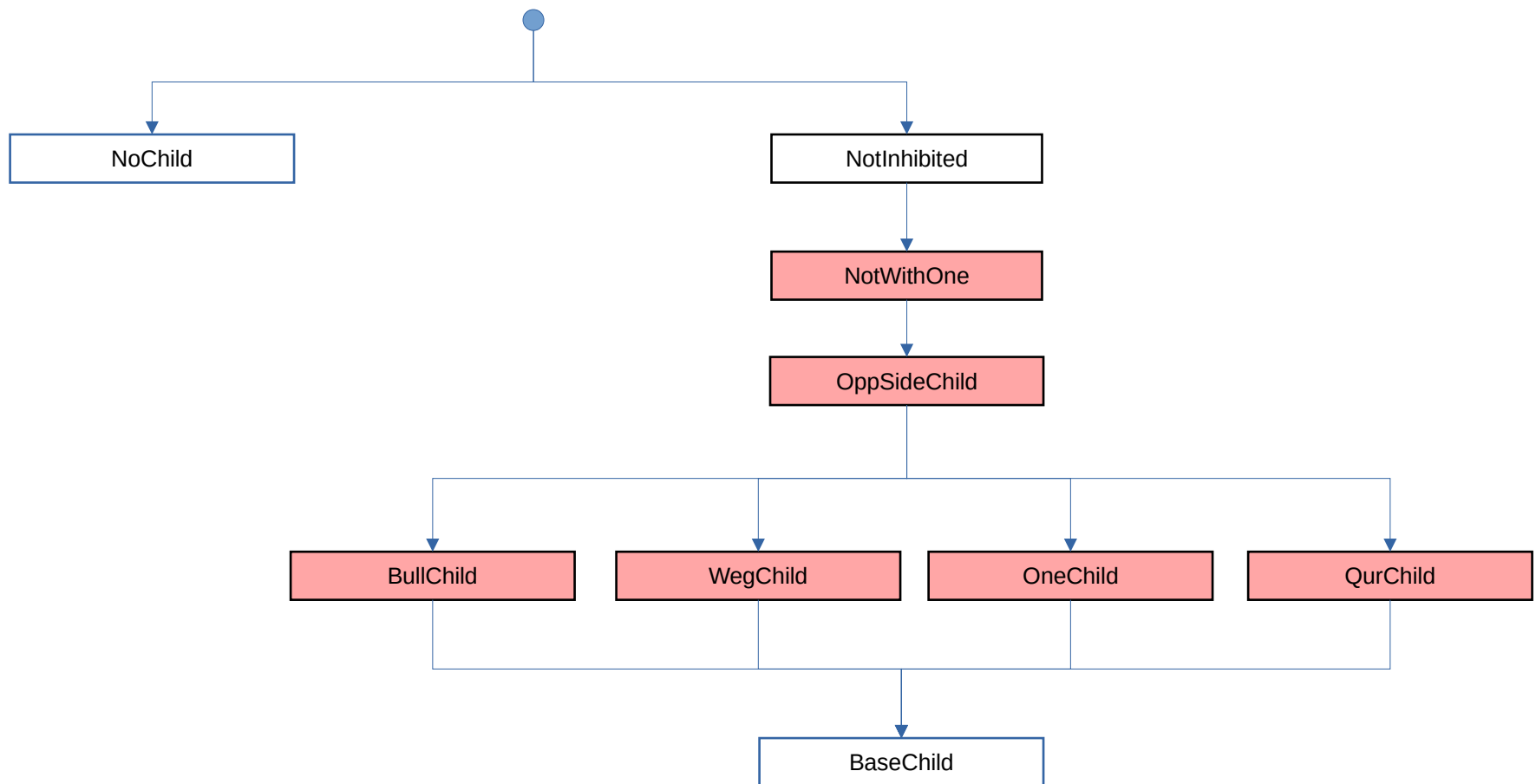
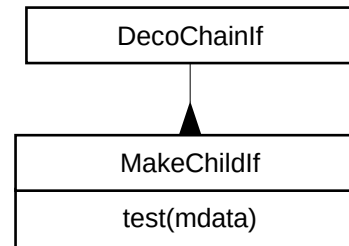
Notes:

- Not all paths are allowed: see ginfo_rules.
- Child and Grand Slam decos cannot occur together.

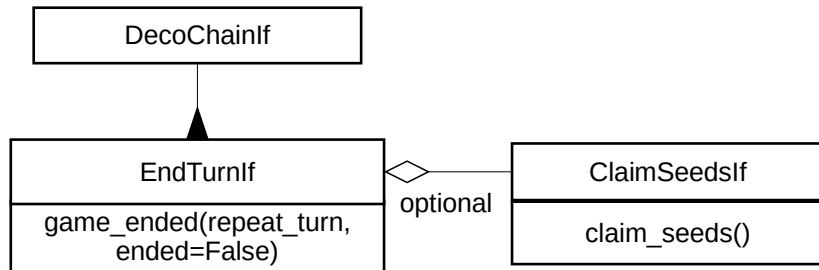
MakeChild Decorator and Chain

State variables read:
board
child
inhibitor
owner
turn

Parameters:
child_cvt
child_rule
child_type



Ender & Quitter Decorators and Chains



State variables:

Reads:

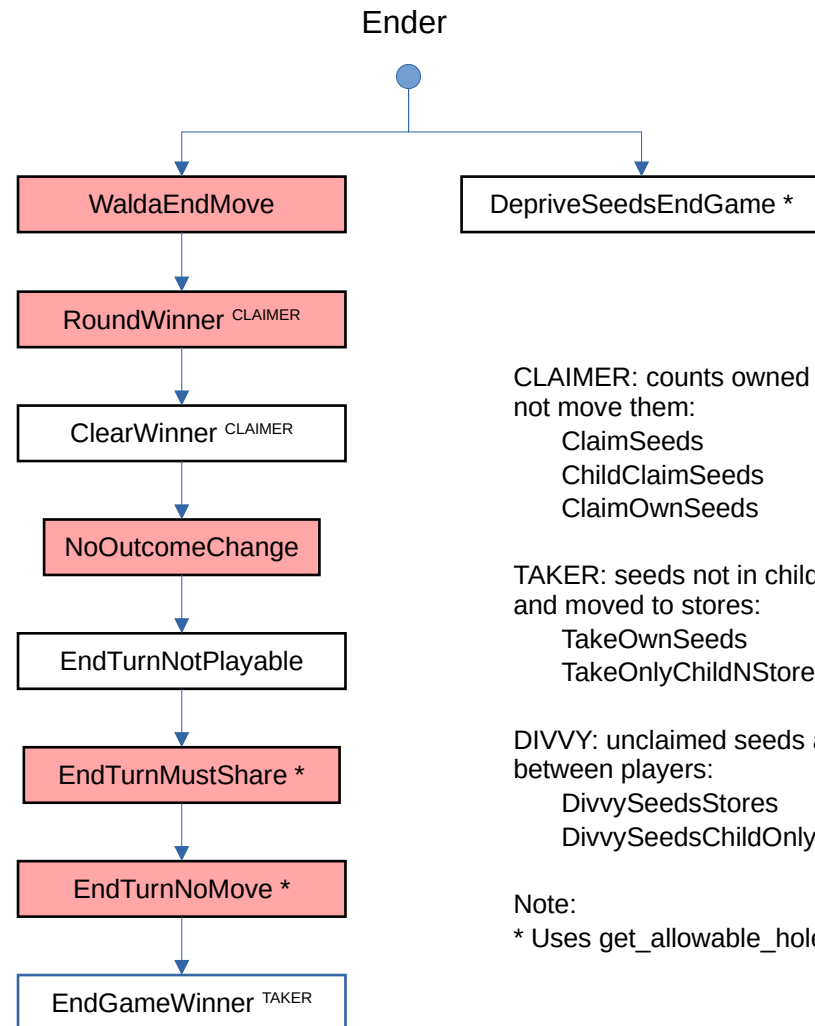
child
owner
turn

Changes:

board
store

Parameters:

capt_min
capt_next
capt_on
capttwoout
child_cvt
child_type
crosscapt
evens
goal
gparam_one
min_move
mlaps
mustpass
mustshare
no_sides
round_fill
rounds
sow_own_store
stores



CLAIMER: counts owned seeds but does not move them:

ClaimSeeds
ChildClaimSeeds
ClaimOwnSeeds

TAKER: seeds not in children are claimed and moved to stores:

TakeOwnSeeds
TakeOnlyChildNStores

DIVVY: unclaimed seeds are split between players:

DivvySeedsStores
DivvySeedsChildOnly

Note:

* Uses get_allowable_holes

