

A Strategy Interface

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A strategy object knows who plays against whom and can answer questions concerning every interaction during the game.

For the Santorini game, a strategy is an instance of the following class:

```
(class/c
  (init-field
    ; the player that owns the strategy:
    (player string?)
    ; the opponent:
    (other string?))

  (initialization
    ; given a list of occupied places on the board,
    ; this strategy picks the next place for the player's worker
    (->m placements/c place/c))
  (take-turn
    ; given a board, which represents the entire game state,
    ; pick the next action (give up, win, move and build)
    (->m board? action?))
  (dead?
    ; given a board, does this strategy consider the
    ; player's situation a dead end?
    (->m board? boolean?))
  (safe-for
    ; is the given action safe for the specified n rounds
    ; in the current game state?
    ; See Assignment 8 for details.
    (->m action? board? natural-number/c boolean?)))
```

A list of occupied places, `placements/c`, specifies where which player has already placed a worker:

```
(define placements/c
  (listof
    (list/c
      string? ; who placed a worker
      in-range? ; at x
      in-range? ; at y on the initial board)))
```