Object diagrams

Diagrams

Object diagrams correspond to use cases with the same numbers (see the use case file). Use case N is connected to object diagrams pre_N (precondition) and post_N (postcondition).

Objects

Objects “Player 1” and “Player 2” represent players of the game. These objects have attributes “Name”.

Objects “Pit (1-6)a/b” represent pits of the mancala board game.

Each player object is connected to 6 different pit objects. Player 1 owns “Pit 1b”, “Pit 2b”, “Pit 3b”, “Pit 4b”, “Pit 5b”, “Pit 6b” and Player 2 owns accordingly “Pit 1a”, “Pit 2a”, “Pit 3a”, “Pit 4a”, “Pit 5a”, “Pit 6a”.

The “Pit 6a/b” is like the topmost pit on each side, when picking some pit, its stones go one by one into every next pit from high to low pit number.

“Pit 1a” is connected to object “Store_Bob” and “Pit 1b” is connected to object “Store_Andy”. Those Store objects represent store pits of the mancala board, the places where each player stores their captured stones.

Object “Stone” represents stones of the mancala game.

Each Pit and Store object can be connected to 0-48 Stone objects. At the start of the game each player's pit is connected to 4 stone objects, and as game goes and pits are being picked, stones go from one pit to another – connections are broke down and created again between different pits and different stones.

Stones are made as objects and not as pit attributes to keep them distinguishable. For example if we decide that each player stones will be different color or depending on the pit – different size. In other words to have an opportunity to give each stone attributes.

Stores are connected to other players sixth pit because that is were stones continue to drop one by one, if number of stones exceeds the number of one player pits.

Object “Turn” represents the player's turn, Player 1 or Player 2 can be connected with it.