Adamas

2007, Cameron Browne, http://www.gamerz.net/pbmserv/adamas.html
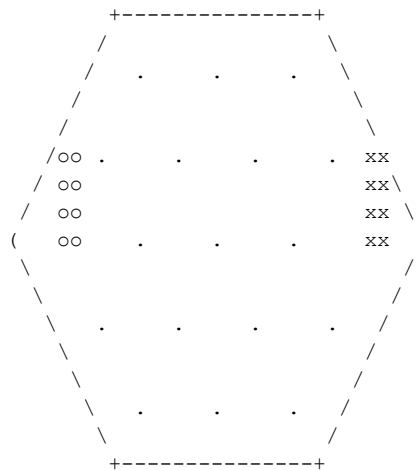
Adamas is a stacking game with free movement and asymmetric capture: if the number of your pieces in line-of-sight of an enemy stack add up to its height, you can capture it.

Start: The board is hexagonally tessellated hexagon with 3 cells per side. Player start with 8 pieces each stacked in opposite corners (the pieces actually form stacks - taller stacks are just shown as piles in the ASCII display to fit them in).

```
              +--------------+
             /                \
            /    .    .    .    \
           /                     \
          /                       \
         /oo .    .    .    . xx
        /  oo                  xx\
       /   oo                  xx \
      (    oo    .    .    . xx   )
       \                        /
        \                      /
         \   .    .    .    .  /
          \                   /
           \                 /
            \   .    .    .  /
             \              /
              +--------------+
```

Play: Each turn the current player may either *split* one or *merge* several of their stacks.

a) *Split*: Any number of pieces can split off a stack in any number of directions, to any point(s) in direct line-of-sight.

b) *Merge*: Any number of pieces from two or more stacks can merge to a single point in direct line-of-sight.

All moves must be to points in unobstructed line-of-sight along any of the six axial directions (there is no jumping of pieces). The destination points may be empty or occupied by friendly stacks, which are added to.

Moving a complete stack from one point to another is just a special case of a split move. Single pieces are considered to be stacks of height 1.
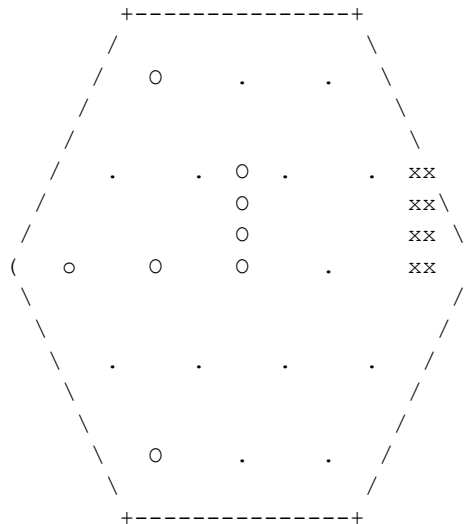
Capture: Any enemy stack with height equal to the total number of differently coloured pieces in line-of-sight (the *visible enemy count*) can be captured by replacement. Multiple enemy stacks may be captured per turn.

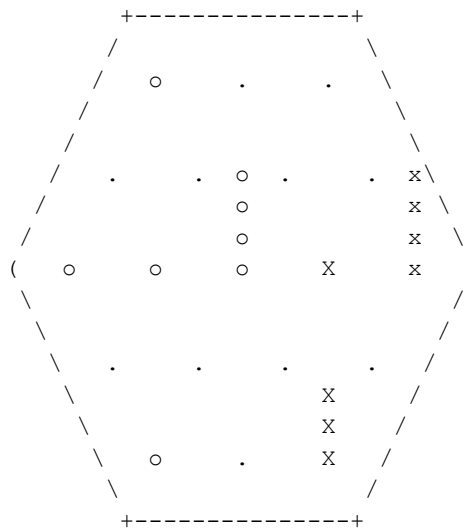The opening player cannot capture on the first move.

Aim: Any player with no remaining pieces or legal moves is removed from the game; the last remaining player wins. The game is tied if only two differently coloured pieces remain and neither can be captured next turn.

Examples

The following example shows O's first move, which splits seven pieces to different positions. Each destination position was in unobstructed line-of-sight of the source stack before the move (but not necessarily after the move).
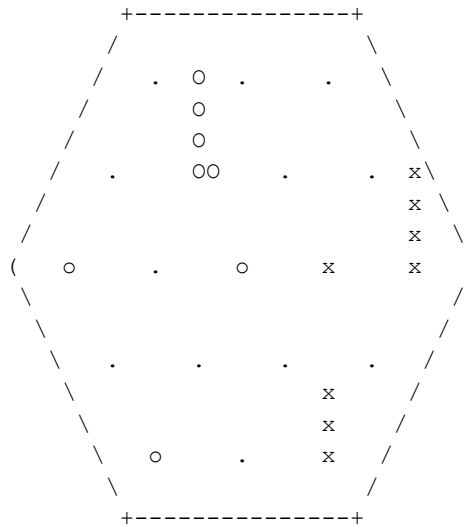
```
                +--------------+
               /                \
              /    O    .    .    \
             /                     \
            /                       \
           /    .    .   O  .   .   xx
          /                 O         xx\
         /                  O         xx \
        (    o    o    O    .     xx   )
         \                            /
          \    .    .    .    .     /
           \                      /
            \   O    .    .     /
             \                /
              +--------------+
```

X replies by moving four pieces as shown below:

```
                +--------------+
               /                \
              /    o    .    .    \
             /                     \
            /                       \
           /    .    .   o  .   .   x\
          /                 o          x \
         /                  o          x  \
        (    o    o    o    X     x   )
         \                            /
          \    .    .    .    .     /
           \                 X    /
            \                X   /
             \   o    .    X  /
              \             /
               +--------------+
```
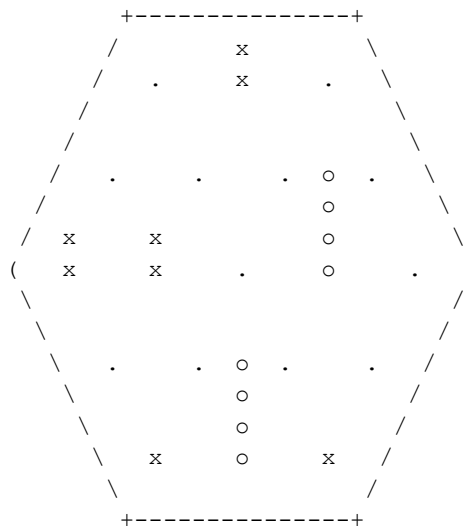
The central O stack is now under threat since its visible enemy count (3+1= 4) is equal to its height (4). X can capture this stack next turn with any or all of the threatening pieces if O does not take immediate evasive action.
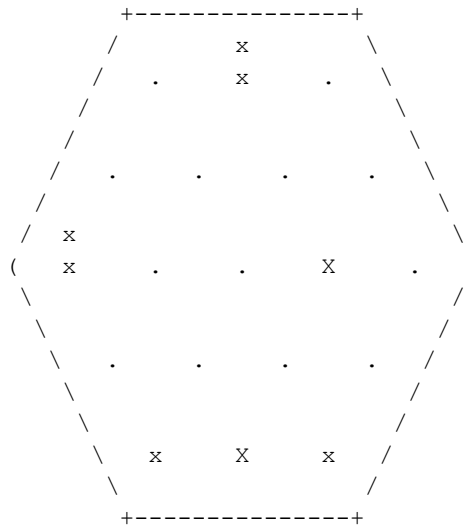
O decides to retreat and merge the threatened 4-stack with one of their their two 1-stacks into a single 6-stack, as shown below. Note that X's 1-stack is now threatened.

```
              +--------------+
             /                \
            /     .   O   .      .     \
           /             O                \
          /              O                  \
         /   .         OO       .      .   x \
        /                                 x   \
       /                                  x    \
      (    O        .        O       x       x    )
       \                                          /
        \                                         /
         \     .         .        .       .     /
          \                       x            /
           \                      x           /
            \    O        .       x          /
             \                              /
              +--------------+
```

The following example shows a multiple capture in action, with X to move. The visible enemy count (i.e. the number of X pieces in direct line-of-sight) from both of O's 4-stacks equals 4, hence each of these 4-stacks is under threat. Note that X's central 2-stack contributes to each of these threats.

```
              +--------------+
             /          x         \
            /     .     x      .     \
           /                          \
          /                            \
         /   .     .      .   O   .     \
        /                      O         \
       /   x       x          O           \
      (   x       x      .    O       .    )
       \                                   /
        \                                 /
         \   .     .   O   .      .      /
          \              O              /
           \             O             /
            \   x        O       x    /
             \                       /
              +--------------+
```

X's best move is to split their central 2-stack as follows, capturing each of O's threatened stacks with a single piece. X has won the game in a single move!

```
                +--------------+
               /       x        \
              /    .   x     .    \
             /                     \
            /                       \
           /    .     .     .    .   \
          /                           \
         /  x                          \
        (   x    .     .     X     .    )
         \                             /
          \                           /
           \   .     .     .     .   /
            \                       /
             \                     /
              \   x     X     x   /
               \                 /
                +--------------+
```

Notes

- When performing multiple captures, the visible enemy count for each stack is calculated once at the start of the turn, by default. This means that threats cannot change as the move is made, otherwise capturing would be too easy.
- The fact that the opening player cannot catpure on the first move somewhat limits their opening options. This helps balance out any inherent first move advantage.
- Capture is asymmetric: stacks can threaten other stacks without themselves being threatened (or at least without being threatened by inferior stacks). This mechanism is a cornerstone of games with capture, otherwise players would never dare threaten enemy pieces and captures would never occur.

History

Adamas rules copyright (c) Cameron Browne, May 2007.

The game was originally called "Adam" because when you see enemy pieces you have to add 'em, but that was a bit silly. "Adamas" sounds much tougher. Thanks to Bill Taylor and Joao Neto for feedback on related stacking ideas.

Adamas was originally played on a board with four cells per side and a 12 piece start, but this proved too confusing and led to drawn out end games, as the larger board offered many avenues of escape for hunted pieces. The smaller board leads to a shorter, more interesting and more puzzle-like game.

Implementation and Help file by Cameron Browne, May 2007.