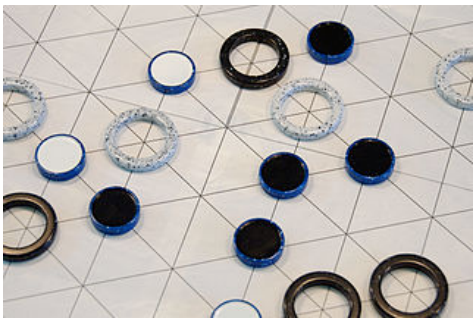
☐ README.md

Yinsh Game Documentation



Game description

YINSH is an abstract strategy board game by game designer Kris Burm. It is the fifth game to be released in the GIPF Project.

Short rules version:
The players each start with 5 rings on the board. Every time a ring is moved, it leaves a marker behind. Markers are white on one side and black on the other. When markers are jumped over by a ring they must be flipped, so their color is constantly changing. The players must try to form a row of 5 markers with their own color face up. If a player succeeds in doing so, he removes one of his rings as an indication that he has formed such a row. The first player to remove 3 of his rings wins the game. In other words, each row you make brings you closer to victory-but also makes you weaker, because you have one less ring to play with. Very tricky!

Extended online rules

Project description

Whole game is displayed in text (ASCII) version. Two players make their moves alternately. Each move is preceded by short note about current player, type of movement and allowable input.

How to play

Game starts with short intro with title and players rings and markers symbols.

```
 _____________________________
|                             |
|            Yinsh            |
|_____________________________|
  BLACK_MARKER: *
  BLACK_RING: c
  WHITE_MARKER: @
  WHITE_RING: o
```

Before each move board in current state is displayed. At the beginning it is empty board.

```
 ---------------------------
|    0 1 2 3 4 5 6 7 8 9 10   |
|  0           .   .          0|
|  1         .   .   .        1|
|  2       .   .   .   .      2|
|  3     .   .   .   .   .    3|
|  4       .   .   .   .      4|
|  5     .   .   .   .   .    5|
|  6   .   .   .   .   .   .  6|
|  7     .   .   .   .   .    7|
|  8   .   .   .   .   .   .  8|
|  9     .   .   .   .   .    9|
| 10   .   .   .   .   .   .  10|
| 11     .   .   .   .   .    11|
| 12   .   .   .   .   .   .  12|
| 13     .   .   .   .   .    13|
| 14       .   .   .   .      14|
| 15     .   .   .   .   .    15|
| 16       .   .   .   .      16|
| 17         .   .   .        17|
| 18           .   .          18|
|    0 1 2 3 4 5 6 7 8 9 10   |
 ---------------------------
```

Board is followed by next movement note.

```
 ---------------------------
|    0 1 2 3 4 5 6 7 8 9 10   |
|  0           .   .          0|
|  1         .   .   .        1|
|  2       .   .   .   .      2|
|  3     .   .   .   .   .    3|
|  4       .   .   .   .      4|
|  5     .   .   .   .   .    5|
|  6   .   .   .   .   .   .  6|
|  7     .   .   .   .   .    7|
|  8   .   .   .   .   .   .  8|
|  9     .   .   .   .   .    9|
| 10   .   .   .   .   .   .  10|
| 11     .   .   .   .   .    11|
| 12   .   .   .   .   .   .  12|
| 13     .   .   .   .   .    13|
| 14       .   .   .   .      14|
| 15     .   .   .   .   .    15|
| 16       .   .   .   .      16|
| 17         .   .   .        17|
| 18           .   .          18|
|    0 1 2 3 4 5 6 7 8 9 10   |
 ---------------------------
Player: White
Placement Type: Placement move
Position (x y - separated with space): 4 4
```

After correct move input, appropriate symbol is placed at given position and board is redrawn.

```
 ---------------------------
|    0 1 2 3 4 5 6 7 8 9 10   |
|  0           .   .          0|
|  1         .   .   .        1|
|  2       .   .   .   .      2|
|  3     .   .   .   .   .    3|
|  4       .   o   .   .      4|
|  5     .   .   .   .   .    5|
|  6   .   .   .   .   .   .  6|
|  7     .   .   .   .   .    7|
|  8   .   .   .   .   .   .  8|
|  9     .   .   .   .   .    9|
| 10   .   .   .   .   .   .  10|
| 11     .   .   .   .   .    11|
| 12   .   .   .   .   .   .  12|
| 13     .   .   .   .   .    13|
| 14       .   .   .   .      14|
| 15     .   .   .   .   .    15|
| 16       .   .   .   .      16|
| 17         .   .   .        17|
| 18           .   .          18|
|    0 1 2 3 4 5 6 7 8 9 10   |
 ---------------------------
```

When each player place all rings on board, placement phase is finished.

```
Placement phase finished.
 ---------------------------
|    0 1 2 3 4 5 6 7 8 9 10   |
|  0           .   o          0|
|  1         .   .   .        1|
|  2       c   .   o   .      2|
|  3     .   .   .   .   o    3|
|  4       .   o   .   .      4|
|  5     .   .   .   .   .    5|
|  6   .   .   .   .   .   .  6|
|  7     .   .   .   .   .    7|
|  8   .   .   .   .   .   c  8|
|  9     .   .   .   .   .    9|
| 10   o   .   .   .   .   c  10|
| 11     .   .   .   .   .    11|
| 12   .   .   .   .   .   c  12|
| 13     .   .   .   .   .    13|
| 14       .   .   .   .      14|
| 15     .   .   .   .   .    15|
| 16       .   .   .   c      16|
| 17         .   .   .        17|
| 18           .   .          18|
|    0 1 2 3 4 5 6 7 8 9 10   |
 ---------------------------
```

Then ring movement phase is continued until one of the players wins or all of markers are used.

```
Player: White
Placement Type: Ring move
Start position (x y - separated with space): 6 0
Start position (x y - separated with space): 7 1
 ----------------------------
|    0 1 2 3 4 5 6 7 8 9 10   |
|  0         .   @          0|
|  1       .   .   o        1|
|  2     c   .   o   .      2|
|  3   .   .   .   .   o    3|
|  4     .   o   .   .      4|
|  5   .   .   .   .   .    5|
|  6 .   .   .   .   .   .  6|
|  7   .   .   .   .   .    7|
|  8 .   .   .   .   .   c  8|
|  9   .   .   .   .   .    9|
| 10 o   .   .   .   .   c 10|
| 11   .   .   .   .   .   11|
| 12 .   .   .   .   .   c 12|
| 13   .   .   .   .   .   13|
| 14     .   .   .   .     14|
| 15   .   .   .   .   .   15|
| 16     .   .   .   c     16|
| 17       .   .   .       17|
| 18         .   .         18|
|    0 1 2 3 4 5 6 7 8 9 10   |
 ----------------------------
```

As long as given position is incorrect, player will be asked for new one.

```
Player: Black
Placement Type: Placement move
Position (x y - separated with space):
Wrong move:  Provide 2 numbers separated with space.  Try again.
Player: Black
Placement Type: Placement move
Position (x y - separated with space): 4, 5
Wrong move:  invalid literal for int() with base 10: '4,'  Try again.
Player: Black
Placement Type: Placement move
Position (x y - separated with space): . .
Wrong move:  invalid literal for int() with base 10: '.'  Try again.
Player: Black
Placement Type: Placement move
Position (x y - separated with space):
```

Code

Project consist of following classes:

game.py:

- Game - general game logic

board.py

- Board - specific board logic

player.py:

- Player - handles user input
- PlayerType - enum
- WhitePlayerStub - white player stub for demo purpose
- BlackPlayerStub - black player stub for demo purpose

move.py

- PlacementMove - Ring placement move representation (first 5 moves)
- RingMove - Ring movement representation (rest of the moves)

main.py - run typical game
demo.py - run test demo

All test included in test directory.

Unimplemented functionality

- Possibility to let user choose which row to delete
- Display user points, left markers
- Add more unit tests
- Complete playerStub classes for full game demo purpose