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1  '''
2  Created on Feb 22, 2015
3
4  @author: mroch
5  '''
6
7  import time
8  import datetime
9  import human # human - human player, prompts for input
10 import boardlibrary # might be useful for debugging
11 import checkerboard
12
13
14 # tonto - Professor Roch's not too smart strategy
15 # You are not given source code to this, but compiled .pyc
    files
16 # are available for Python 3.5 and 3.6 (fails otherwise).
17 # This will let you test some of your game logic without
    having to worry
18 # about whether or not your AI is working and let you pit
    your player
19 # against another computer player.
20 # initializing tonto
21 import imp
22 import sys
23 major = sys.version_info[0]
24 minor = sys.version_info[1]
25 modpath = "__pycache__/_tonto.cpython-{}.{}.pyc".format(
    major, minor)
26 tonto = imp.load_compiled("tonto", modpath)
27
28
29 def elapsed(earlier, later):
30     """elapsed - Convert elapsed time.time objects to
    duration string
31
32     Useful for tracking move and game time. Example
    pseudocode:
33
34     gamestart = time.time()
35
36     while game not over:
37         movestart = time.time()
38         ... logic ...
39         current = time.time()
40         print("Move time: {} Game time: {}".format(
41             elapsed(movestart, current), elapsed(gamestart
42             , current))

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43
44     """
45     return time.strftime('%H:%M:%S', time.gmtime(later -
earlier))
46
47
48 def Game(red=human.Strategy, black=tonto.Strategy,
49         maxplies=5, init=None, verbose=True, firstmove=0)
:
50     """Game(red, black, maxplies, init, verbose, turn)
51     Start a game of checkers
52     red,black - Strategy classes (not instances) # Not
invoked
53     maxplies - # of turns to explore (default 10)
54     init - Start with given board (default None uses a
brand new game)
55     verbose - Show messages (default True)
56     firstmove - Player N starts 0 (red) or 1 (black).
Default 0.
57     """
58
59     # Example of creating a game
60     #ai_player = ai.strategy('r', checkerboard.
CheckerBoard, maxplies) # todo
61     # create a checkerboard with this particular state
62     red_player = red('r', checkerboard.CheckerBoard,
maxplies)
63     black_player = black('b', checkerboard.CheckerBoard,
maxplies)
64
65     board = checkerboard.CheckerBoard()
66
67     board.turncount = 0
68     while board.is_terminal()[0] is False:
69         if board.turn_count % 2 == 0:
70             [board, red_action] = red_player.play(board)
71             print("Red player moved {}".format(red_action)
)
72             print(board)
73             if board.turn_count % 2 != 0:
74                 [board, black_action] = black_player.play(
board)
75                 print("Black player moved {}".format(
black_action))
76                 print(board)
77                 board.turn_count += 1
78             print("Winner chicken dinner is: " + str(board.
is_terminal()[1]))
79

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80
81 if __name__ == "__main__":
82     Game()
```