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13 February 2015

Modelling Players - Random Machine and Human

Full code: <https://github.com/hscells/CSC466/blob/master/ttt3.lisp>

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demo-random-human

The line method wouldn't work in my testing. The visualise method also has a problem displaying plays occasionally.

Losing

```
[1]> (demo-random-human)
-- -- --
-- -- --
-- -- --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting NW for my move
END RANDOM PLAYER MOVE ...
X1  --  --
--  --  --
--  --  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (N NE W C E SW S SE)
c
END HUMAN PLAYER MOVE
X1  --  --
--  --  --
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting S for my move
END RANDOM PLAYER MOVE ...
X1  --  --
--  --  --
--  --  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (N NE W E SW SE)
w
END HUMAN PLAYER MOVE
X1  --  --
O4  O2  --
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting NE for my move
END RANDOM PLAYER MOVE ...
X1  --  X5
O4  O2  --
--  --  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (N E SW SE)
e
END HUMAN PLAYER MOVE
X1  --  X5
O4  O2  O6
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting N for my move
END RANDOM PLAYER MOVE ...
X1  X7  X5
O4  O2  O6
--  X3  --
BEGIN HUMAN PLAYER MOVE ...
```

```

Please select a move from (SW SE)
sw
END HUMAN PLAYER MOVE
  X1  X7  X5
  O4  O2  O6
  O8  X3  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting SE for my move
END RANDOM PLAYER MOVE ...
(NW C S W NE E N SW SE)
  X1  X7  X5
  O4  O2  O6
  O8  X3  X9
L
NIL

```

Winning

```

[1]> (demo-random-human)
-- -- --
-- -- --
-- -- --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting NW for my move
END RANDOM PLAYER MOVE ...
  X1  --  --
  --  --  --
  --  --  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (N NE W C E SW S SE)
s
END HUMAN PLAYER MOVE
  X1  --  --
  --  --  --
  --  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting SW for my move
END RANDOM PLAYER MOVE ...
  X1  --  --
  --  --  --
  --  --  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (N NE W C E SE)
n
END HUMAN PLAYER MOVE
  X1  O4  --
  --  --  --
  --  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting W for my move
END RANDOM PLAYER MOVE ...
  X1  O4  --
  X5  --  --
  --  --  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (NE C E SE)
c
END HUMAN PLAYER MOVE

```

```

X1  O4  --
X5  O6  --
X3  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting NE for my move
END RANDOM PLAYER MOVE ...
X1  O4  X7
X5  O6  --
X3  O2  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (E SE)
se
END HUMAN PLAYER MOVE
X1  O4  X7
X5  O6  --
X3  O2  O8
BEGIN RANDOM PLAYER MOVE ...
randomly selecting E for my move
END RANDOM PLAYER MOVE ...
(NW S SW N W C NE SE E)
X1  O4  X7
X5  O6  X9
X3  O2  O8
W
NIL

```

Draw

```

[1]> (demo-random-human)
--  --  --
--  --  --
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting NW for my move
END RANDOM PLAYER MOVE ...
X1  --  --
--  --  --
--  --  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (N NE W C E SW S SE)
c
END HUMAN PLAYER MOVE
X1  --  --
--  --  --
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting S for my move
END RANDOM PLAYER MOVE ...
X1  --  --
--  --  --
--  --  --
BEGIN HUMAN PLAYER MOVE ...
Please select a move from (N NE W E SW SE)
n
END HUMAN PLAYER MOVE
X1  O4  --
--  O2  --
--  --  --

```

```

BEGIN RANDOM PLAYER MOVE ...
randomly selecting W for my move
END RANDOM PLAYER MOVE ...
X1  O4  --
X5  O2  --
--  --  --

BEGIN HUMAN PLAYER MOVE ...
Please select a move from (NE E SW SE)
sw
END HUMAN PLAYER MOVE
X1  O4  --
X5  O2  --
O6  --  --

BEGIN RANDOM PLAYER MOVE ...
randomly selecting NE for my move
END RANDOM PLAYER MOVE ...
X1  O4  X7
X5  O2  --
O6  X3  --

BEGIN HUMAN PLAYER MOVE ...
Please select a move from (E SE)
e
END HUMAN PLAYER MOVE
X1  O4  X7
X5  O2  O8
O6  X3  --

BEGIN RANDOM PLAYER MOVE ...
randomly selecting SE for my move
END RANDOM PLAYER MOVE ...
(NW C S N W SW NE E SE)
X1  O4  X7
X5  O2  O8
O6  X3  X9

D
NIL

```

demo-random-random

For some reason, the RNG would end up giving me the same result each time the demo is run.

```
[1]> (demo-random-random)
-- -- --
-- -- --
-- -- --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting NW for my move
END RANDOM PLAYER MOVE ...
X1  --  --
--  --  --
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting N for my move
END RANDOM PLAYER MOVE ...
X1  O2  --
--  --  --
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting S for my move
END RANDOM PLAYER MOVE ...
X1  O2  --
--  --  --
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting E for my move
END RANDOM PLAYER MOVE ...
X1  O2  --
--  --  --
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting NE for my move
END RANDOM PLAYER MOVE ...
X1  O2  X5
--  --  O4
--  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting SW for my move
END RANDOM PLAYER MOVE ...
X1  O2  X5
--  --  O4
O6  --  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting SE for my move
END RANDOM PLAYER MOVE ...
X1  O2  X5
--  --  O4
O6  X3  --
BEGIN RANDOM PLAYER MOVE ...
randomly selecting C for my move
END RANDOM PLAYER MOVE ...
X1  O2  X5
--  O8  O4
O6  X3  X7
```

```
BEGIN RANDOM PLAYER MOVE ...  
randomly selecting W for my move  
END RANDOM PLAYER MOVE ...  
(NW N S E NE SW SE C W)  
X1 O2 X5  
X9 O8 O4  
O6 X3 X7  
D  
NIL
```

