Readme

Language Used: Java
JRE: 7

How to run the program:
The main class to run the program is **PlayOthello.java.**
Program takes three arguments:

arg1: size of board
arg2: color controlled by program (B/W)
arg3:search depth limit

eg. 8 B 3

Example Outputs/Transcript:
parameters passed: 4 W 3

init
....
.WB.
.BW.
....
reset
....
....
....
....
init
....
.WB.
.BW.
....
init
....
.WB.
.BW.
....

```
move B
# Making move for B
# considering: (0,1),mm=-251.0
# considering: (1,0),mm=-251.0
# considering: (2,3),mm=77.0
# considering: (3,2),mm=77.0
(2,3)
# score:3
# ....
# .WB.
# .BBB
# ....
move W
# Making move for W
# considering: (1,3),mm=-144.0
# considering: (3,1),mm=-140.0
# considering: (3,3),mm=-156.0
(3,1)
# score:0
# ....
# .WB.
# .WBB
# .W..
move B
# Making move for B
# considering: (0,0),mm=863.0
# considering: (1,0),mm=-209.0
# considering: (2,0),mm=85.0
# considering: (3,0),mm=75.0
(0,0)
# score:3
# B...
# .BB.
# .WBB
# .W..
move W
# Making move for W
# considering: (0,1),mm=-206.0
# considering: (0,3),mm=20.0
```

```
# considering: (1,3),mm=-66.0
(0,3)
# score:0
# B..W
# .BW.
# .WBB
# .W..
move B
# Making move for B
# considering: (0,1),mm=787.0
# considering: (0,2),mm=943.0
# considering: (1,3),mm=809.0
# considering: (2,0),mm=895.0
(0,2)
# score:3
# B.BW
# .BB.
# .WBB
# .W..
move W
# Making move for W
# considering: (0,1),mm=-74.0
# considering: (1,3),mm=-184.0
(0,1)
# score:-2
# BWWW
# .WB.
# .WBB
# .W..
move B
# Making move for B
# considering: (1,0),mm=771.0
# considering: (2,0),mm=889.0
# considering: (3,0),mm=891.0
(3,0)
# score:1
# BWWW
# .WB.
# .BBB
```

```
# BW..
move W
# Making move for W
# considering: (1,3),mm=-39.0
# considering: (3,2),mm=-153.0
# considering: (3,3),mm=-112.0
(1,3)
# score:-4
# BWWW
# .WWW
# .BWB
# BW..
move B
# Making move for B
# considering: (3,2),mm=1012.0
# considering: (3,3),mm=800.0
(3,2)
# score:-1
# BWWW
# .WWW
# .BWB
# BBB.
move W
# Making move for W
# considering: (2,0),mm=-209.0
# considering: (3,3),mm=-39.0
(3,3)
# score:-4
# BWWW
# .WWW
# .BWW
# BBBW
move B
# Making move for B
forfeit
# score:-4
# BWWW
# .WWW
# .BWW
```

BBBW
move W
Making move for W
considering: (2,0),mm=-74.0
(2,0)
score:-7
BWWW
.WWW
WWWW
BBBW
move B
Making move for B
considering: (1,0),mm=1018.0
(1,0)
score:-2
BWWW
BWWW
BBWW
BBBW
game over

Example 2

Arguments: 6 W 2

Making move for B
considering: (1,2),mm=332.0
considering: (2,1),mm=332.0
considering: (3,4),mm=332.0
considering: (4,3),mm=332.0
(1,2)
Making move for W
considering: (1,1),mm=4.9E-324
considering: (1,3),mm=4.9E-324
considering: (3,1),mm=4.9E-324
(1,1)
......
.WB...
..WB..
..BW..

```
# ......
# ......
#Current Score:0
# Making move for B
# considering: (1,0),mm=4.9E-324
# considering: (2,1),mm=512.0
# considering: (3,4),mm=1.0
# considering: (4,3),mm=1.0
(2,1)
# Making move for W
# considering: (1,3),mm=4.9E-324
# considering: (3,1),mm=4.9E-324
(1,3)
# ......
# .WWW..
# .BBW..
# ..BW..
# ......
# ......
#Current Score:-2
# Making move for B
# considering: (0,0),mm=379.0
# considering: (0,1),mm=256.0
# considering: (0,2),mm=114.0
# considering: (0,3),mm=4.9E-324
# considering: (0,4),mm=284.0
# considering: (1,4),mm=8.0
# considering: (2,4),mm=4.9E-324
# considering: (3,4),mm=159.0
# considering: (4,4),mm=212.0
(0,0)
# Making move for W
# considering: (1,0),mm=4.9E-324
# considering: (2,0),mm=4.9E-324
# considering: (3,0),mm=4.9E-324
# considering: (3,1),mm=4.9E-324
# considering: (4,1),mm=4.9E-324
# considering: (4,2),mm=4.9E-324
(1,0)
```

```
# B.....
# WWWW..
# .BBW..
# ..BW..
# ......
# ......
#Current Score:-2
# Making move for B
# considering: (0,1),mm=707.0
# considering: (0,2),mm=379.0
# considering: (0,3),mm=627.0
# considering: (0,4),mm=377.0
# considering: (1,4),mm=679.0
# considering: (2,0),mm=663.0
# considering: (2,4),mm=457.0
# considering: (3,4),mm=317.0
# considering: (4,4),mm=315.0
(0,1)
# Making move for W
# considering: (2,0),mm=4.9E-324
# considering: (3,0),mm=4.9E-324
# considering: (3,1),mm=4.9E-324
# considering: (4,1),mm=4.9E-324
# considering: (4,2),mm=4.9E-324
# considering: (4,3),mm=4.9E-324
(2,0)
# BB....
# WBWW..
# WWWW..
# ..BW..
# ......
# ......
#Current Score:-4
# Making move for B
# considering: (0,2),mm=681.0
# considering: (1,4),mm=105.0
# considering: (3,0),mm=1125.0
# considering: (3,1),mm=657.0
# considering: (3,4),mm=183.0
```

```
# considering: (4,4),mm=481.0
(3,0)
# Making move for W
# considering: (3,1),mm=4.9E-324
# considering: (4,1),mm=4.9E-324
# considering: (4,2),mm=4.9E-324
# considering: (4,3),mm=4.9E-324
(3,1)
# BB....
# BBWW..
# BWWW..
# BWWW..
# ......
# ......
#Current Score:-2
# Making move for B
# considering: (0,3),mm=995.0
# considering: (1,4),mm=791.0
# considering: (2,4),mm=993.0
# considering: (3,4),mm=245.0
# considering: (4,1),mm=1185.0
# considering: (4,2),mm=1071.0
# considering: (4,3),mm=1091.0
# considering: (4,4),mm=1091.0
(4,1)
# Making move for W
# considering: (4,0),mm=4.9E-324
# considering: (5,0),mm=4.9E-324
(4,0)
# BB....
# BBWW..
# BBWW..
# BWWW..
# WB....
# ......
#Current Score:0
# Making move for B
# considering: (0,3),mm=1013.0
# considering: (1,4),mm=799.0
```

```
# considering: (2,4),mm=793.0
# considering: (3,4),mm=644.0
# considering: (4,2),mm=1013.0
# considering: (4,3),mm=971.0
# considering: (4,4),mm=1180.0
# considering: (5,0),mm=1628.0
(5,0)
# Making move for W
# considering: (5,1),mm=4.9E-324
(5,1)
# BB....
# BBWW..
# BBWW..
# BWWW..
# BW....
# BW....
#Current Score:0
# Making move for B
# considering: (0,3),mm=1430.0
# considering: (0,4),mm=1722.0
# considering: (1,4),mm=1112.0
# considering: (2,4),mm=1348.0
# considering: (3,4),mm=760.0
# considering: (4,2),mm=1816.0
# considering: (4,3),mm=1326.0
# considering: (4,4),mm=1546.0
# considering: (5,2),mm=1628.0
(4,2)
# Making move for W
# considering: (5,2),mm=4.9E-324
(5,2)
# BB....
# BBWW..
# BBWW..
# BBWW..
# BBW...
# BWW...
#Current Score:2
# Making move for B
```

```
# considering: (0,3),mm=1518.0
# considering: (0,4),mm=1668.0
# considering: (1,4),mm=1210.0
# considering: (2,4),mm=1436.0
# considering: (3,4),mm=1030.0
# considering: (4,3),mm=1900.0
# considering: (4,4),mm=1734.0
# considering: (5,3),mm=1816.0
(4,3)
# Making move for W
# considering: (3,4),mm=-1646.0
# considering: (5,3),mm=-1442.0
(5,3)
# BB....
# BBWW..
# BBWW..
# BBBW..
# BBBW..
# BWWW..
#Current Score:4
# Making move for B
# considering: (0,2),mm=1622.0
# considering: (0,3),mm=1602.0
# considering: (0,4),mm=1666.0
# considering: (1,4),mm=1208.0
# considering: (2,4),mm=1806.0
# considering: (3,4),mm=1242.0
# considering: (4,4),mm=1550.0
# considering: (5,4),mm=1900.0
(5,4)
# Making move for W
forfeit
# BB....
# BBWW..
# BBWW..
# BBBW..
# BBBB..
# BBBBB.
#Current Score:13
```

```
# Making move for B
# considering: (0,2),mm=2002.0
# considering: (0,3),mm=764.0
# considering: (0,4),mm=1918.0
# considering: (1,4),mm=1538.0
# considering: (2,4),mm=1812.0
# considering: (3,4),mm=1186.0
# considering: (4,4),mm=2000.0
(0,2)
# Making move for W
forfeit
# BBB...
# BBBW..
# BBBW..
# BBBW..
# BBBB..
# BBBBB.
#Current Score:18
# Making move for B
# considering: (0,3),mm=1676.0
# considering: (0,4),mm=1724.0
# considering: (1,4),mm=1792.0
# considering: (2,4),mm=1622.0
# considering: (3,4),mm=1954.0
# considering: (4,4),mm=2030.0
(4,4)
# Making move for W
forfeit
# BBB...
# BBBW..
# BBBW..
# BBBB..
# BBBBB.
# BBBBB.
#Current Score:21
# Making move for B
# considering: (0,3),mm=1732.0
# considering: (0,4),mm=1754.0
# considering: (1,4),mm=1676.0
```

```
# considering: (2,4),mm=1678.0
# considering: (3,4),mm=2060.0
(3,4)
# Making move for W
forfeit
# BBB...
# BBBW..
# BBBB..
# BBBBB.
# BBBBB.
# BBBBB.
#Current Score:24
# Making move for B
# considering: (0,3),mm=1790.0
# considering: (0,4),mm=1732.0
# considering: (1,4),mm=1734.0
# considering: (2,4),mm=1786.0
(0,3)
# Making move for W
forfeit
# BBBB..
# BBBB..
# BBBB..
# BBBBB.
# BBBBB.
# BBBBB.
#Current Score:27
GameOver 28
```