

## Programing Assignment #5

CSCE 625 - Artificial Intelligence

Spring 2015

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1. The source code I turned in are named "Board.java" and "Othello.java". Open a Command Prompt, enter the folder where the source codes are located. Compile with command "javac Othello.java". Then run with command "java Othello"(shown in Figure 1 in blue frames).

2. Then type in commands, shown in Figure 1 in orange frames. The chosen moves are in green frames.

(1). othello 6 B 6

(2). init

(3). move B

(4). move W

```
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C:\Windows\System32>cd C:\Users\001\Desktop\AI_hw5

C:\Users\001\Desktop\AI_hw5>javac Othello.java

C:\Users\001\Desktop\AI_hw5>java Othello
othello 6 B 6
init
# . . . . .
# . . . . .
# . . W B . .
# . . B W . .
# . . . . .
# . . . . .
move B
making move for B...
#considering: <3,4>, mm=-2
#considering: <1,2>, mm=-2
#considering: <4,3>, mm=-2
#considering: <2,1>, mm=-2
<3 4>
# score=3
# . . . . .
# . . . . .
# . . W B . .
# . . B B B .
# . . . . .
# . . . . .
move W
making move for W...
#considering: <2,4>, mm=5
#considering: <4,2>, mm=3
#considering: <4,4>, mm=5
<4 2>
# score=0
# . . . . .
# . . . . .
# . . W B . .
# . . W B B .
# . . W . . .
# . . . . .
```

Figure 1

3. You can specialize a legal move by yourself. Shown in Figure 2 in orange frames.

```
put B 0 0
illegal input coordinate. Enter again.
put B 3 2
illegal input coordinate. Enter again.
put B 3 1
# score=3
# . . . . .
# . . . . .
# . . W B . .
# . B B B B .
# . . W . . .
# . . . . .
```

Figure 2

4. When game finishes, it is shown in Figure 3.

```
move W
making move for W...
#considering: <4,0>, mn=?
<4 0>
# score=?
# W W W W B B
# W W W W B B
# W W W B B B
# W W B B B B
# W B B B B B
# . B B B B B
move B
making move for B...
No more moves.
making move for W...
Game over
game over. score=?
```

Figure 3

5. You can also type in commands "reset" and "quit", shown in Figure 4 in orange frames.

```
<4 2>
# score=0
# . . . . .
# . . . . .
# . . W B . .
# . . W B B .
# . . W . . .
# . . . . .
reset
# . . . . .
# . . . . .
# . . . . .
# . . . . .
# . . . . .
# . . . . .
init
# . . . . .
# . . . . .
# . . W B . .
# . . B W . .
# . . . . .
# . . . . .
quit
game over. score=0
```

Figure 4

## Appendix A: Transcript

```
C:\Users\001\Desktop\AI_hw5>java Othello
```

```
othello 6 B 6
```

```
init
```

```
# .....
```

```
# .....
```

```
# .. W B ..
```

```
# .. B W ..
```

```
# .....
```

```
# .....
```

```
move B
```

```
making move for B...
```

```
#considering: (3,4), mm=-2
```

```
#considering: (1,2), mm=-2
```

```
#considering: (4,3), mm=-2
```

```
#considering: (2,1), mm=-2
```

```
(3 4)
```

```
# score=3
```

```
# .....
```

```
# .....
```

```
# .. W B ..
```

```
# .. B B B .
```

```
# .....
```

```
# .....
```

```
move W
```

```
making move for W...
```

```
#considering: (2,4), mm=5
```

```
#considering: (4,2), mm=3
```

```
#considering: (4,4), mm=5
```

```
(4 2)
```

```
# score=0
```

```
# .....
```

```
# .....
```

```
# .. W B ..
```

```
# .. W B B .
```

```
# .. W ...
```

```
# .....
```

```
put B 0 0
```

illegal input coordinate. Enter again.

put B 3 2

illegal input coordinate. Enter again.

put B 3 1

# score=3

# . . . . .

# . . . . .

# . . W B . .

# . B B B B .

# . . W . . .

# . . . . .

. . .

. . .

move W

making move for W...

#considering: (4,0), mm=7

(4 0)

# score=7

# W W W W B B

# W W W W B B

# W W W B B B

# W W B B B B

# W B B B B B

# . B B B B B

move B

making move for B...

No more moves.

making move for W...

Game over

game over. score=7