

# CS 380: Assignment 2

## Fall 2006

**Written** Due before class on 2006-11-01

From R&N Chapter 6: Exercises 6.1, 6.3a–c, 6.16

*Extra Credit:* 6.3d

Please show all work.

**Programming** Due before class on 2006-11-06

You should have already downloaded and installed the sourcecode for Othello. If not, the code is available from the course website. A README file is provided that has instructions on how to interface your code with the existing infrastructure.

You are to create a new othello-playing agent. Your agent should be implemented as a class extending `edu.drexel.cs.ai.othello.OthelloPlayer`. Your class should be in a package called “`students.lastname`” and the class itself should be called “`FirstnamesOthelloPlayer`.” For example:

```
package students.sultanik;

import java.util.Date;

import edu.drexel.cs.ai.othello.*;

public class EvansOthelloPlayer extends OthelloPlayer {
    public EvansOthelloPlayer(String name) {
        super(name);
    }

    public Square getMove(GameState currentState, Date deadline) {
        /* Implement MiniMax with Alpha-Beta and return your move choice here */
    }
}
```

You must implement, at a minimum, MiniMax search with Alpha-Beta pruning, as is described in Figure 6.7 from the textbook.

**NOTE:** for this assignment you *are not required* to implement time-critical reasoning code to interface with the `deadline` argument. Instead, you may choose to implement a naïve depth-based cutoff in your `TERMINAL-TEST` function. If you choose this approach, you must decide on a cutoff depth such that your agent takes no more than about 30 seconds to choose a move. Your agent must honor the `deadline` argument for the competition, however.