

If your interest is playing against a perfect opponent, by all means explore the games you can find on the Web. In doing so, you'll also learn what makes a good visual presentation of the game. That's a topic not covered in this book. If you're particularly interested in programming, I suggest supplementing the rudimentary board displays in this section with much better ones. If your primary interest is the logic of playing the game, then the computer displays in this section are adequate.

If your interest is writing a program that plays a “pretty good” game rather than a “perfect” one, then this is the chapter for you. We're going to use an approach to all the two-person games in this section that is very straightforward—we're going to create a program that plays the game exactly the way we think we do. Having done this for many different games, I can assure you that this approach can beat most challengers most of the time—including you! That's right. You write the program and you write it to play exactly as you think you do—**and it will beat you far more often than you will believe.**

Let's get started.

Connect Four

Connect Four is a wonderfully simple game that can be played by seven-year olds. The same Connect Four with the same rules is also a very complex game that can fascinate two very clever adults for many hours.

The picture on the right is a Connect Four game produced by Milton Bradley in 1986. It was described as a “vertical checkers game” even though it has no relationship at all to the game of checkers.

Rules of Connect Four are easy. Two players, each with a set of colored markers, take turns. On each turn a player can drop one of his or her markers down any one of the 7 columns. The marker will fall to the lowest of the 6 rows in which there is no marker. The first player to get four sequential markers of his or her own in a row, column, or diagonal is the winner.



This game can be played with a set of coins for markers on a piece of paper containing the 7-column, 6-row grid. As is usually the case, playing with the actual board is more appealing. Used Connect Four games like the one in the previous illustration are almost always available online for less than \$10.