You are to write a program that plays the game, “Tic-tac-toe”. This is the
simple game played on a 3x3 board, in which two players alternately mark a
square with his or her mark (typically, an “X” or an “O”). The first player to
get three of his or her marks in a line along a row, column, or diagonal wins.
The figure shows, from left to right, a progression of board positions as smart
player “X” trounces on stupid player “O”.

Your program need not be a perfect player, but it should not be altogether
incompetent either, and it must not cheat. If during a turn it has the opportu-
nity to get three marks in a line and win, it should. Otherwise, if its opponent
has two marks in a line with the remaining square blank, the program should
block by taking the blank square. Beyond this, use whatever strategy seems
best to you.

Either you or or your program should be able to go first; when the program
begins running, it should ask you as to who goes first. If the program goes
first, it must randomly select any of the nine squares to be its first move. You
can specify your moves by entering the row, column of the position you wish to
mark (though more sophisticated input is also allowed). After each move made
by the program, print a representation of the board. When there is a winner,
your program should indicate who won. Your program must also stop if the
board filled up without a winner.

Pay attention to how nicely your program prints everything, such as prompts
and the representations of the board. Make sure your program is well com-
mented. It must run on Unix.

You must email your source file to the grader assigned to your section (in-
dicating in your subject line that this is a project submission for Beginning C).
Be sure your comments clearly indicate who you are!