CS110: Computer Programming Lab Department of CSE IIT, Guwahati

Module 02 Stage 02 Exercise 04

Problem description

Game of tic-tac-toe has a board of 3 rows and 3 columns. During a game the positions on the board are either unoccupied or have a single character. The only valid characters in a position are 'O' and 'X'. To avoid confusion in the input of the board position, we will mark the unoccupied position by character '?'.

Write a program that reads three input lines (rows) of 5 characters each. The characters at position 2 and 4 are always a space; other characters in each line are 'O', 'X' or '?'.

The input is invalid if it contains other characters in a position. It is also invalid if count of 'O' and 'X' on board does not differ by 1.

If the input board arrangement is valid, find it 'X' or 'O' has won the board. If so report the winning character.

Otherwise if no position has character '?', print "Game over." message. If the game is not over, indicate which character will move next.