Project 1: Design Tic-Tac-Toe Game

Design a Tic-tac-toe game that is played between two players on a n x n grid.

Rules are listed as follows:

1. Every mark placed must be valid and be placed on an empty block.
2. Once a winning condition is reached, which means there’s a winner, no more mark placing is allowed.
3. A player who succeeds in placing n of their marks in a horizontal, vertical, or diagonal row wins the game.
4. The mark of one player is ‘X’, and another one is ‘O’.

**API:**

public class TicTacToe

TicTacToe()       initialize your data structure

initializeBoard()  set or reset the board back to all empty values

printBoard()       print the current board

isBoardFull()      check if the board is full or not

checkForWin()   check if there’s a winner or not

changePlayer()  change player marks back and forth

placeMark()    place the mark of the current player at the cell specified by row and col