In Battleships, both players have a secret grid. We will assume the grid is produced and stored as a matrix of 0's and 1's. Write MATLAB code for the following:

1. A function to display the grid suitably.
2. A function that is passed a grid and the start coordinates and length of a horizontal ship, and determines whether a ship can be added there to the grid.
3. A function that is passed a grid and the length of a horizontal ship, and adds such a ship randomly to the grid in a legal place.