Saddle Points

Write a function called **saddle** that finds saddle points in the input matrix **M**. For the purposes of this problem, a saddle point is defined as an element whose value is greater than or equal to every element in its row, and less than or equal to every element in its column. Note that there may be more than one saddle point in **M**. Return a matrix called **indices** that has exactly two columns. Each row of indices corresponds to one saddle point with the first element of the row containing the row index of the saddle point and the second element containing the column index. If there is no saddle point in **M**, then **indices** is the empty array.

Your Function

Save Reset MATLAB Documentation (https://www.mathworks.com/help/)

```
1
```

Code to call your function

Reset

```
% create an interesting surface
[X,Y] = meshgrid(-15:0.5:10,-10:0.5:10);
Z = (X.^2-Y.^2)';
% find saddle points
indices = saddle(Z)
% plot surface
surf(Z);
hold on
% mark saddle points with red dots in the same figure
for ii = 1:size(indices,1)
    h = scatter3(indices(ii,2),indices(ii,1),Z(indices(ii,1),indices(ii,2)),'red','filled');
    h.SizeData = 120;
end
% adjust viewpoint
view(-115,14);
hold off
```

Run Function

Assessment:

Submit

Various input vectors and matrices