Problem 4. Make a checkerboard matrix

Given an integer n, make an n-by-n matrix made up of alternating ones and zeros as shown below. The a(1,1) should be 1.

Example:

```
 % Input  n = 5
 % Output a is [1 0 1 0 1
 %               0 1 0 1 0
 %               1 0 1 0 1
 %               0 1 0 1 0
 %               1 0 1 0 1]
```

Scratch Pad

```
n = 5
```

```
n = 5
```

```


checkerboard(n)
```

```
ans = 5×5
     1     0     1     0     1
     0     1     0     1     0
     1     0     1     0     1
     0     1     0     1     0
     1     0     1     0     1
```

Test Suite

```
% try
%
% catch ME
%     fprintf('%s\n', ME.message);
% end
```

Solution

```
function a = checkerboard(n)
  a = zeros(n);
  a(1:2:end, 1:2:end) = 1;
  a(2:2:end, 2:2:end) = 1;
end
```