5ELEN018W - Solutions to Selected Tutorial 1 Exercises

Functions

The max function can be coded in a number of different ways if not using the built-in `max` function (using the built-in versions is always better!).

Below 2 different ways are shown:

```matlab
function a = mymaximum(A)
  [rows, columns] = size(A)

  % columns max
  cmax = zeros(1,columns)
  for i=1:rows
      for j=1:columns
          if A(i, j) > cmax(1, j)
              cmax(1,j) = A(i,j)
          end
      end
  end


  % rows max
  rmax = zeros(1,rows)
  for i=1:rows
      for j=1:columns
          if A(i, j) > rmax(1, i)
              rmax(1,i) = A(i,j)
          end
      end
  end

  a = [cmax; rmax];

end


function a = mymaximum(A)
  [rows, columns] = size(A)
```

```matlab
% columns max
cmax = zeros(1,columns)
for i=1:columns
    c = A(:, i)
    for j = 1:length(c)
        if (c(j) > cmax(1,i))
            cmax(1, i) = c(j)
        end
    end
end


% rows max
rmax = zeros(1,rows)
for i=1:rows
    r = A(i,:)
    for j=1:length(r)
        if (r(j) > rmax(i))
            rmax(i) = r(j)

        end
    end

    a = [cmax; rmax];

end
```