```
function Matri = RatioMat (n,m)
%HOMEWORK 5 - MECH 103
%Abdulla Al Ameri
%Date: 30, January, 2018
%--------------------------
%FUNCTION FEATURES:
%
%This function (RatioMat) returns an n x m matrix with elements that
 have the
%following values
%   1) The value of each element in the first row is the number of the
 column.
%   2) The value of each element in the first column is the number of
 the row.
%   3) The rest of the elements each has a value equal to the sum of
 the
%   element above it and element to the left.
%
%--------------------------
%
%The function will return an error if the user does not exactly input
 2
%arguments
%
%--------------------------
%INPUTS:
%       n - Number of raws
%       m - Number columns
%
%-----------------------
%OUTPUTS:
%       n x m matrix that has "FUNCTION FEATURES"
%--------------------------


%If user inputs more than 2 arguments error massage will show up!

if nargin ~= 2
    error('WatchOut! Only 2 Inputs allowed, first  number of raws,
 then number of columns');
end

% h is a vector that has the number of rows
% k is a vector that has the number of columns

for h = 1:n;
    for k = 1:m;
         if k == 1;
        Matri (h,k) = h;
         elseif h == 1;
        Matri (h,k) = k;
         else
```

```
        Matri (h,k) = Matri(h-1,k) + Matri(h,k-1) ;
    end

    end

end
```

```
ans =

     1     2     3     4     5     6     7     8     9    10
     2     4     7    11    16    22    29    37    46    56
     3     7    14    25    41    63    92   129   175   231
     4    11    25    50    91   154   246   375   550   781
```

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