```
function [A] = HW_5_Sarah_Verderame(n,m)
%HOMEWORK 5, SARAH VERDERAME This is a function that returns an n by m
 matrix with spcefic elements.
%   The value of each element in the first row is the number of the
 column.
%   The value of each element in the first column is the number of the
 row.
%   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 must return a sensible error if the user does not
 input
%   exactly two arguments.

n=8; %gave function two input arguments
m=8;

fun = 'HW_5_Sarah_Verderame';
nargin(fun); %checking to make sure there are two arguments

if nargin(fun) ~= 2
    error ('This function does not have two input arguments!') %will
 throw an error if not exactly two arguments

end

for R = 1:n
    for C = 1:m
        if R==1
            A(R,C)=C; %same number as C
        elseif C==1
            A(R,C)=R; %same number as R
        else
            A(R,C)= A(R,C-1)+ A(R-1,C); %The sum of the element above
 it and the element to the left
        end
    end
end
end
```

```
ans =

  Columns 1 through 6

           1           2           3           4           5
  6
           2           4           7          11          16
 22
           3           7          14          25          41
 63
           4          11          25          50          91
 154
```

```
           5          16          41          91         182
336
           6          22          63         154         336
672
           7          29          92         246         582
1254
           8          37         129         375         957
2211

  Columns 7 through 8

           7           8
          29          37
          92         129
         246         375
         582         957
        1254        2211
        2508        4719
        4719        9438
```

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