运行说明和实验结果展示

主代码的展示

命令行窗口

```
>> %% create matrix
>> m = input('input m = ');
input m = 5
>> n = input('input n = ');
input n = 5
>> %% transpose matrix
>> A = rand(m,n);
>> B = Transpose(A);
>> %% maximal
>> s_maximal = MAX(A);
>> s_minmal = MIN(A);
>> %% use bubble sort
>> S = Sort(A);
```

在命令行界面里面分别对应五个功能

首先生成一个矩阵

变量 - A

A

5x5 double

	1	2	3	4	5	6
1	0.1299	0.1622	0.6020	0.4505	0.8258	
2	0.5688	0.7943	0.2630	0.0838	0.5383	
3	0.4694	0.3112	0.6541	0.2290	0.9961	
4	0.0119	0.5285	0.6892	0.9133	0.0782	
5	0.3371	0.1656	0.7482	0.1524	0.4427	
6						

进行转置操作

变量 - B

B

5x5 double

	1	2	3	4	5	6
1	0.1299	0.5688	0.4694	0.0119	0.3371	
2	0.1622	0.7943	0.3112	0.5285	0.1656	
3	0.6020	0.2630	0.6541	0.6892	0.7482	
4	0.4505	0.0838	0.2290	0.9133	0.1524	
5	0.8258	0.5383	0.9961	0.0782	0.4427	
6						

```
function s_minimal = MIN(A)
[r,coder] = size(A);
s_minimal = A(1,1);
for i = 1 : r
    for j = 1 : coder
        if s_minimal > A(i,j)
            s_minimal = A(i,j);
        end
    end
end
```

输入矩阵的行数和列数

m	5
n	5

寻找到矩阵中的最大值和最小值

s_maximal	0.9961
s_minmal	0.0119

找到最大数据

```
function s_maxim[illegible] = MAX(A)
s_maximal = A(1,1);
[r,coder] = size(A);
for i = 1 : r
    for j =1 : coder
        if s_maximal < A(i,j)
            s_maximal = A(i,j);
        end
    end
end
```

/Users/csgo/Documents/MATLAB/

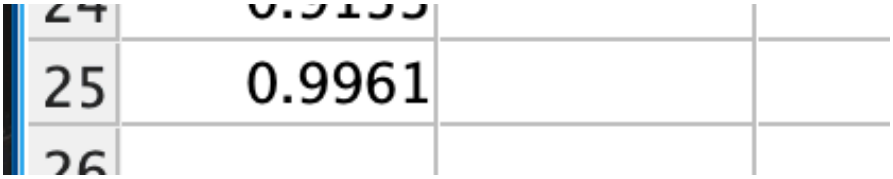
找到最小数据

```
function s_minimal = MIN(A)
[r,coder] = size(A);
s_minimal = A(1,1);
for i = 1 : r
    for j = 1 : coder
        if s_minimal > A(i,j)
            s_minimal = A(i,j);
        end
    end
end
```

通过冒泡排序对矩阵中的元素进行排序

25x1 double

	1	2	
3	0.0838		
4	0.1299		
5	0.1524		
6	0.1622		
7	0.1656		
8	0.2290		
9	0.2630		
10	0.3112		
11	0.3371		
12	0.4427		
13	0.4505		
14	0.4694		
15	0.5285		
16	0.5383		
17	0.5688		
18	0.6020		
19	0.6541		
20	0.6892		
21	0.7482		
22	0.7943		
23	0.8258		
24	0.9133		




```
function [S] = Sort(A)
[r,coder] = size(A);
S = zeros(r*coder,1);
for i = 1 : r
    for j = 1 : coder
        S(i+r*(j-1)) = A(i,j);
    end
end
% bubble sort
for i = 1 : r*coder - 1
    for j = 1 : r*coder - i
        if(S(j) > S(j+1))
            temp = S(j);
            S(j) = S(j+1);
            S(j+1) = temp;
        end
    end
end
```