

MATLAB R2021a - academic use

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FILE NAVIGATE EDIT BREAKPOINTS RUN

C:\Users\Ruochoen\Desktop\FALL 2022\BMI 500\lab1\prev_matlab_codes

Current Folder

- Name
- Git
- Ruochoen_Kong_hw4.pdf
- QM.m
- prob3f.pdf
- prob3d.pdf
- prob3.m
- prob1.pdf
- prob1.m
- pm.m
- orthogonal1.m
- ortho.m
- HW 4 instructions.pdf
- GS.m
- check.m

Editor - C:\Users\Ruochoen\Desktop\FALL 2022\BMI 500\lab1\prev_matlab_codes\p

```

1 function probl
2
3     fprintf('-----part b)-----\n')
4     A = [0,1,0,0,1;
5         1,0,1,1,1;
6         0,1,0,0,0;
7         0,1,0,0,1;
8         1,1,0,1,0];
9
10    [n,~] = size(A);
11
12    [Q,V] = ortho(A,10^-8);
13
14    for i = 1:n
15        fprintf('e-value %d: %2.8e\n',i,V(i))
16    end
17
18    fprintf('\nFinal Q(e-vectors):\n')
19    disp(Q);
20
21    s1 = sum(V);
22    s2 = transpose(V)*V;
23
24    fprintf('\nSum of E-value      : %2.8e\n',s1);
25    fprintf('Sum of squared E-value: %2.8e\n',s2);
26
27
28

```

Command Window

```

133
133
133
133
89
178
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133
133
133
hours = 50
>> profile viewer
fx >>

```

orthogonal1.m (Function)

orthogonal iteration: first version

orthogonal1()

GS(B)

Profiler

PROFILER

Print Profile Summary Back Forward Find... Highlight Enter code to run and time Start Profiling

FILE NAVIGATE SEARCH VIEW PROFILE

Profile Summary (Total time: 0.064 s)

Flame Graph

Profile Summary

Generated 03-Sep-2022 22:03:59 using performance time.

Function Name	Calls	Total Time (s)	Self Time (s)	Total Time Plot (dark band = self time)
prob3	1	0.045	0.028	
pm	2	0.017	0.017	
prob1	1	0.012	0.003	
ortho	2	0.008	0.004	
workspacefunc	3	0.008	0.003	
GS	92	0.005	0.005	
now	3	0.002	0.001	
workspacefunc>getCleanupHandler	3	0.001	0.001	
datenum	3	0.001	0.001	
workspacefunc>getWhosInformation	3	0.001	0.000	
..._mathworks.mlwidgets.workspace.MatlabWorkspaceListener.swl(swl)	3	0.000	0.000	
..._s.mlwidgets.workspace.MatlabWorkspaceListener.swl (Java method)	6	0.000	0.000	
..._s.mlwidgets.workspace.WhosInformation.getInstance (Java method)	3	0.000	0.000	

*Self time is the time spent in a function excluding any time spent in child functions. The time includes any overhead time resulting from the profiling process.