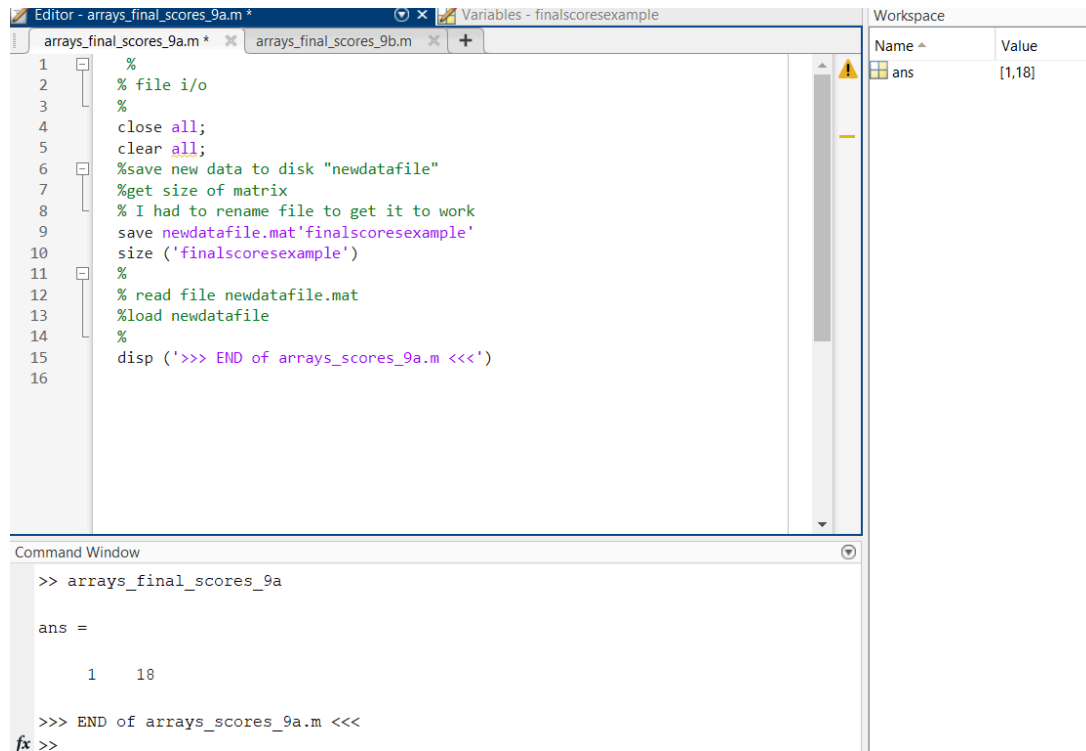


## ECE 101 Matlab Assignment #5

September 29, 2024

### Part A

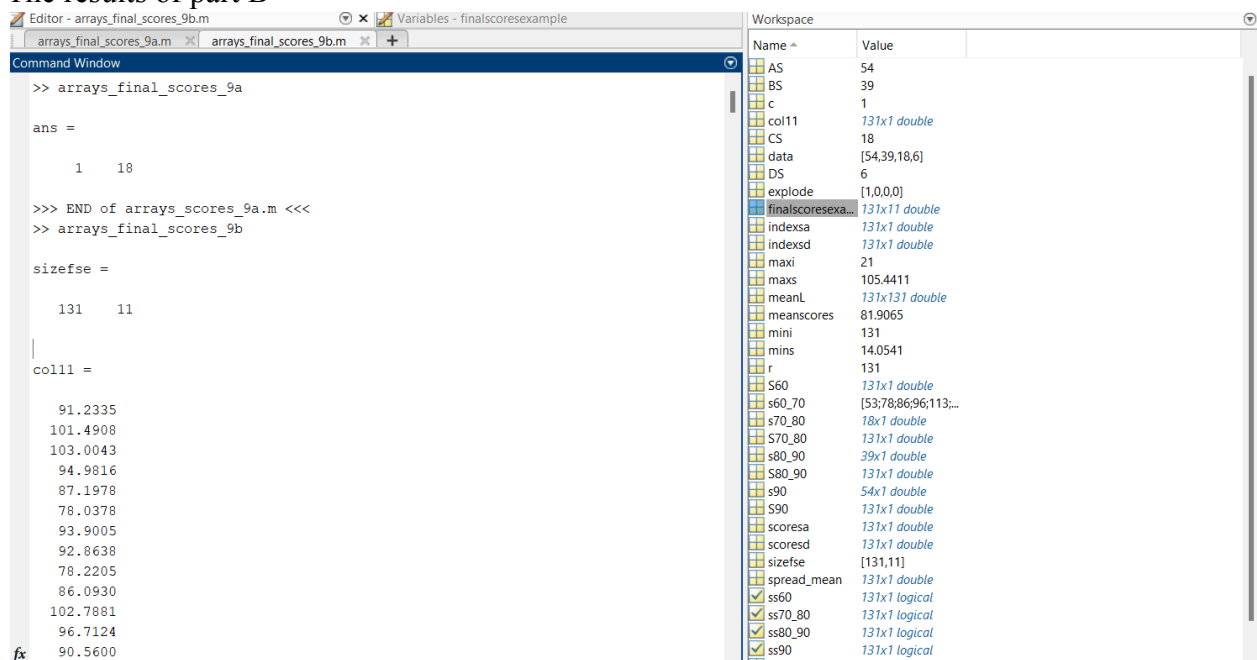


The screenshot shows the MATLAB Editor with a script named `arrays_final_scores_9a.m`. The script contains the following code:

```
1 %  
2 % file i/o  
3 %  
4 close all;  
5 clear all;  
6 %save new data to disk "newdatafile"  
7 %get size of matrix  
8 % I had to rename file to get it to work  
9 save newdatafile.mat 'finalscoresexample'  
10 size ('finalscoresexample')  
11 %  
12 % read file newdatafile.mat  
13 %load newdatafile  
14 %  
15 disp ('>>> END of arrays_scores_9a.m <<<')  
16
```

The Workspace window on the right shows a variable `ans` with a value of `[1,18]`. The Command Window shows the execution of `arrays_final_scores_9a`, resulting in `ans = 1 18` and the message `>>> END of arrays_scores_9a.m <<<`.

### The results of part B



The screenshot shows the MATLAB Editor with a script named `arrays_final_scores_9a.m`. The script contains the following code:

```
>> arrays_final_scores_9a  
  
ans =  
  
    1    18  
  
>>> END of arrays_scores_9a.m <<<  
>> arrays_final_scores_9b  
  
sizefse =  
  
    131    11  
  
col11 =  
  
    91.2335  
    101.4908  
    103.0043  
    94.9816  
    87.1978  
    78.0378  
    93.9005  
    92.8638  
    78.2205  
    86.0930  
    102.7881  
    96.7124  
    90.5600
```

The Workspace window on the right shows a list of variables and their values:

Name	Value
AS	54
BS	39
c	1
col11	131x1 double
CS	18
data	[54,39,18,6]
DS	6
explode	[1,0,0]
finalscoresexa...	131x11 double
indexsa	131x1 double
indexsd	131x1 double
maxi	21
maxs	105.4411
meanL	131x131 double
meanscores	81.9065
mini	131
mins	14.0541
r	131
s60	131x1 double
s60_70	[53;78;86;96;113;...
s70_80	18x1 double
s70_80	131x1 double
s80_90	39x1 double
s80_90	131x1 double
s90	54x1 double
s90	131x1 double
scoresa	131x1 double
scoresd	131x1 double
sizefse	[131,11]
spread_mean	131x1 double
ss60	131x1 logical
ss70_80	131x1 logical
ss80_90	131x1 logical
ss90	131x1 logical

Part A gave results only for the matrix size, while Array, after editing the code  
The first time I tried to run the code itself, it couldn't detect the file I wanted to read and tell me the data, so I had to add some practice for it to run properly.

PartB gave us all the information and data calculations for the total, average, min, max, etc.  
I could get the full picture of Part B, So I copied and pasted the data down right below,  
showcasing all the results given on Part B when I ran the code.

```
>> arrays_final_scores_9a
```

```
ans =
```

```
1 18
```

```
>>> END of arrays_scores_9a.m <<<
```

```
>> arrays_final_scores_9b
```

```
sizeofse =
```

```
131 11
```

```
col11 =
```

```
91.2335  
101.4908  
103.0043  
94.9816  
87.1978  
78.0378  
93.9005  
92.8638  
78.2205  
86.0930  
102.7881  
96.7124  
90.5600  
103.5578  
86.3514  
99.6259  
74.1708
```

91.3135  
31.4314  
85.2876  
105.4411  
98.2303  
101.7935  
83.0130  
99.5622  
85.9243  
70.6886  
99.6865  
81.1676  
102.8422  
88.2032  
83.8346  
75.7297  
93.7114  
92.1622  
76.2843  
95.2605  
86.3092  
81.8108  
95.8876  
101.7200  
75.8411  
94.0670  
26.5222  
50.0541  
81.8714  
93.6432  
81.6173  
84.0724  
20.0000  
89.2281  
90.0141  
67.7027  
88.8714  
103.5978  
84.2605  
92.4281

90.4724  
58.6335  
93.1308  
76.4508  
84.6584  
92.2130  
91.9005  
97.7124  
75.5276  
75.9470  
94.2141  
99.4908  
81.2519  
81.3730  
104.3070  
74.8108  
77.7568  
93.2249  
87.5341  
96.8432  
63.0865  
92.7968  
90.0984  
81.1351  
97.8335  
80.8584  
92.9914  
83.9427  
65.1892  
80.2162  
84.4638  
83.6530  
88.5686  
99.0768  
84.6984  
74.9232  
81.0854  
73.6389  
65.6000  
80.8335

86.3784  
81.2389  
88.1708  
86.5232  
36.0714  
56.8292  
77.6032  
72.5795  
86.3924  
82.5546  
42.5946  
23.7838  
90.8097  
41.6216  
93.8443  
68.0789  
62.4184  
70.7157  
87.3286  
74.2962  
96.2897  
93.2941  
91.2649  
90.6086  
20.0897  
103.6897  
98.6076  
94.8649  
91.9373  
41.8638  
37.0270  
88.6876  
93.6216  
14.0541

r =

c =

1

scoresa =

14.0541  
20.0000  
20.0897  
23.7838  
26.5222  
31.4314  
36.0714  
37.0270  
41.6216  
41.8638  
42.5946  
50.0541  
56.8292  
58.6335  
62.4184  
63.0865  
65.1892  
65.6000  
67.7027  
68.0789  
70.6886  
70.7157  
72.5795  
73.6389  
74.1708  
74.2962  
74.8108  
74.9232  
75.5276  
75.7297  
75.8411  
75.9470

76.2843  
76.4508  
77.6032  
77.7568  
78.0378  
78.2205  
80.2162  
80.8335  
80.8584  
81.0854  
81.1351  
81.1676  
81.2389  
81.2519  
81.3730  
81.6173  
81.8108  
81.8714  
82.5546  
83.0130  
83.6530  
83.8346  
83.9427  
84.0724  
84.2605  
84.4638  
84.6584  
84.6984  
85.2876  
85.9243  
86.0930  
86.3092  
86.3514  
86.3784  
86.3924  
86.5232  
87.1978  
87.3286  
87.5341  
88.1708

88.2032  
88.5686  
88.6876  
88.8714  
89.2281  
90.0141  
90.0984  
90.4724  
90.5600  
90.6086  
90.8097  
91.2335  
91.2649  
91.3135  
91.9005  
91.9373  
92.1622  
92.2130  
92.4281  
92.7968  
92.8638  
92.9914  
93.1308  
93.2249  
93.2941  
93.6216  
93.6432  
93.7114  
93.8443  
93.9005  
94.0670  
94.2141  
94.8649  
94.9816  
95.2605  
95.8876  
96.2897  
96.7124  
96.8432  
97.7124



97.8335  
98.2303  
98.6076  
99.0768  
99.4908  
99.5622  
99.6259  
99.6865  
101.4908  
101.7200  
101.7935  
102.7881  
102.8422  
103.0043  
103.5578  
103.5978  
103.6897  
104.3070  
105.4411

indexsa =

131  
50  
122  
109  
44  
19  
102  
128  
111  
127  
108  
45  
103  
59  
114  
78  
86

96  
53  
113  
27  
115  
105  
95  
17  
117  
73  
93  
66  
33  
42  
67  
36  
61  
104  
74  
6  
9  
87  
97  
83  
94  
81  
29  
99  
70  
71  
48  
39  
46  
107  
24  
89  
32  
85  
49  
56

88  
62  
92  
20  
26  
10  
38  
15  
98  
106  
101  
5  
116  
76  
100  
31  
90  
129  
54  
51  
52  
80  
58  
13  
121  
110  
1  
120  
18  
64  
126  
35  
63  
57  
79  
8  
84  
60  
75  
119

130  
47  
34  
112  
7  
43  
68  
125  
4  
37  
40  
118  
12  
77  
65  
82  
22  
124  
91  
69  
25  
16  
28  
2  
41  
23  
11  
30  
3  
14  
55  
123  
72  
21

scoresd =

105.4411  
104.3070

103.6897  
103.5978  
103.5578  
103.0043  
102.8422  
102.7881  
101.7935  
101.7200  
101.4908  
99.6865  
99.6259  
99.5622  
99.4908  
99.0768  
98.6076  
98.2303  
97.8335  
97.7124  
96.8432  
96.7124  
96.2897  
95.8876  
95.2605  
94.9816  
94.8649  
94.2141  
94.0670  
93.9005  
93.8443  
93.7114  
93.6432  
93.6216  
93.2941  
93.2249  
93.1308  
92.9914  
92.8638  
92.7968  
92.4281  
92.2130

92.1622  
91.9373  
91.9005  
91.3135  
91.2649  
91.2335  
90.8097  
90.6086  
90.5600  
90.4724  
90.0984  
90.0141  
89.2281  
88.8714  
88.6876  
88.5686  
88.2032  
88.1708  
87.5341  
87.3286  
87.1978  
86.5232  
86.3924  
86.3784  
86.3514  
86.3092  
86.0930  
85.9243  
85.2876  
84.6984  
84.6584  
84.4638  
84.2605  
84.0724  
83.9427  
83.8346  
83.6530  
83.0130  
82.5546  
81.8714

81.8108  
81.6173  
81.3730  
81.2519  
81.2389  
81.1676  
81.1351  
81.0854  
80.8584  
80.8335  
80.2162  
78.2205  
78.0378  
77.7568  
77.6032  
76.4508  
76.2843  
75.9470  
75.8411  
75.7297  
75.5276  
74.9232  
74.8108  
74.2962  
74.1708  
73.6389  
72.5795  
70.7157  
70.6886  
68.0789  
67.7027  
65.6000  
65.1892  
63.0865  
62.4184  
58.6335  
56.8292  
50.0541  
42.5946  
41.8638

41.6216  
37.0270  
36.0714  
31.4314  
26.5222  
23.7838  
20.0897  
20.0000  
14.0541

indexsd =

21  
72  
123  
55  
14  
3  
30  
11  
23  
41  
2  
28  
16  
25  
69  
91  
124  
22  
82  
65  
77  
12  
118  
40  
37  
4  
125



68  
43  
7  
112  
34  
47  
130  
119  
75  
60  
84  
8  
79  
57  
63  
35  
126  
64  
18  
120  
1  
110  
121  
13  
58  
80  
52  
51  
54  
129  
90  
31  
100  
76  
116  
5  
101  
106  
98  
15

38  
10  
26  
20  
92  
62  
88  
56  
49  
85  
32  
89  
24  
107  
46  
39  
48  
71  
70  
99  
29  
81  
94  
83  
97  
87  
9  
6  
74  
104  
61  
36  
67  
42  
33  
66  
93  
73  
117  
17

95  
105  
115  
27  
113  
53  
96  
86  
78  
114  
59  
103  
45  
108  
127  
111  
128  
102  
19  
44  
109  
122  
50  
131

maxs =

105.4411

maxi =

21

mins =

14.0541

mini =

131

AS =

54

BS =

39

CS =

18

DS =

6

>>> END of arrays\_final\_scores\_9b.m <<<

>>