

LAB QUIZ/EXAM/TEST THIS FRI <sup>MIN ORIG.</sup>  
YOU CAN USE 1 SHEET OF NOTES IN YOUR <sup>HANDWRITING</sup>

PROBABLE ASSIGNMENT

GENERATE A 2D ARRAY, E.G., OF RANDOM FLOAT PT OR INTEG  
FIND INDICES & VALUES OF THE ELEMENTS WITH THE  
MIN VALUE & MAX VALUES

1<sup>st</sup> WITHOUT USING MATLAB'S MIN, MAX, FIND, FINDP, etc.  
2<sup>nd</sup> USING → " " " " " "

POSSIBLE?... EXTRA CREDIT

IF MORE THAN ONE ELEMENT HAS MIN VALUE  
REPORT INDICES OF EACH ONE - ALSO FOR MAX

	c1	c2	c3
r1			
r2			
r3		6	

VALUE IS 6

POSITION  
IN  
ARRAY

→ INDICES 3, 2

PSEUDO-CODE

GEN ARRAY  $\rightarrow$  "a"

INITIALIZE CURRENT MIN VALUE "mn" (ASSUME DO NOT KNOW a'S RANGE)  
e.g.,  $mn = a(1,1)$

REPEAT THRU ALL ROWS  $\rightarrow$  "for"

REPEAT THRU ALL COLS  $\rightarrow$  "for"

@ SOME r, c LOCATION  $\rightarrow a(r,c)$

IF VALUE IN  $a(r,c) < mn$

SET NEW VALUE OF mn TO  $a(r,c)$

REMEMBER r AS A ROW VALUE OF A MIN VALUE FOR NOW  $\rightarrow r_{mn} = r$   
" c " " COL " " " " " " " " " "  $\rightarrow c_{mn} = c$

$\swarrow$  AND SIMILAR EVERYWHERE FOR MAX

DISPLAY RESULTS  $\rightarrow mn, r_{mn}, c_{mn}$

2nd PASS TO FIND INDEXES/INDICES OF  
ALL ELEMENTS WITH THE MIN (OR MAX) VALUE

~~REPEAT ALL ROWS~~  
REPEAT ALL ROWS

REPEAT ALL COLS

IF  $a(r, c) == mn$

APPEND  $r$  &  $c$  TO  $r_{mn}$  &  $c_{mn}$  ARRAYS

$r_{mn} = [r_{mn}, r]$

etc.