

## Homework #5

Scientific Computing (501125-2)

2022-2023 3rd Trimester

Due: Wednesday June 7, 2023, 11:59 pm via Blackboard

- 1) Write the if statement syntax.
- 2) Use TWO if statements to write a Matlab program that checks whether the entered value by a user is greater than 100 or less than or equal to 100.  
(Hint use:  $x > 100$  and  $x \leq 100$ )
- 3) Use an if-else statement to write a Matlab program that checks whether the entered value by a user is greater than 100 or less than or equal to 100. (Hint use:  $x > 100$  and  $x \leq 100$ )
- 4) Use a nested if statement to write a Matlab program that checks the student's grade. That is, the program asks the user to enter a random number and does the following:
  - If the entered grade is greater than a 100, the program prints out that "The entered grade is invalid > 100"
  - If the entered grade is between 90 and 100, the program prints out that "Your grade is A"
  - If the entered grade is greater than or equal to 80 and less than 90, the program prints out that "Your grade is B"

- If the entered grade is greater than or equal to 70 and less than 80, the program prints out that "Your grade is C"
- If the entered grade is greater than or equal to 60 and less than 70, the program prints out that "Your grade is D"
- If the entered grade is greater than or equal to 0 and less than 60, the program prints out that "Your grade is F"
- Otherwise, the program prints out that "The entered grade is invalid < 0"

Q 5, 6, 7, 8, and 9 are NOT required!

5) What is the benefit of using cell array?

6) What type of brackets must we use to reference cell arrays?

7) Create a 2 by 3 cell array named **M** and fill it with the following values

**M =**

<b>'a'</b>	<b>'ff'</b>	<b>'cc'</b>
<b>'c'</b>	<b>'fff'</b>	<b>'e'</b>

8) Create a 3 by 2 cell array named **Mix** and fill it with the following values

**M =**

<b>[1 2 3]</b>	<b>'HELLO'</b>	<b>'TU'</b>
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9) Given the following Matlab command:

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M = {'a', 97, [4 5 6]}
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M{3}
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o What is the result of M{3}?