

Homework #5

Scientific Computing (501125-2)

Spring 2021

Due on: Tuesday April 13, 2021, 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"

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 =
    'a'    'ff'    'cc'
    'c'    'fff'   'e'
```

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

```
M =
    [1  2  3]    'HELLO'    'TU'
    'CIT'        [22]       5
```

9) Given the following Matlab command:

```
M = {'a',97,[4 5 6]}
```

```
M{3}
```

o What is the result of M{3}?