<u>BE- Discussion #4, 2020-09-25</u>

+ please make sure that you are in the correct discussion section
+ please unmute, show video, and fully participate!

Announcements
- always do the reading! Lecture videos are just supplemental
- quiz #2 @ 4:40 pm EDT : 10 min to complete, 5 to upload
    - alternate quiz tomorrow morning for other time zones
    - 0.5 pts deducted for every minute late
- homework #1 due Monday
- Exam #1 next Friday @ 4:30 pm EDT (no EK100)
    - start studying now!
- Questions? Check to see if already answered on the Discussion Forum!

Review Quiz 1

Review of Material
- Selection Statements : if, if-else, switch
- is functions
- For loops + nested for loops

How to accomplish the <u>following</u>?

```
* * * * *
* * * *
* * *
* *
*
```

```
for i = 5 : -1 : 1
    for j = 1 : i
        fprintf('*')
    end
    fprintf('\n')
end
```

use a nested for loop!

<u>Write a function using a loop that tests if a number is prime or not. Then print if
the value is prime or not.</u>

```
function primeNumber (n)
% Don't forget your block comment!
tprime = 1;
for i = n-1 : -1 : 2
    if mod(n, i) == 0
        tprime = 0;
    end
end
if tprime == 0
    disp('This is not a prime number!')
else
    disp('This is a prime number.')
end
end
```

Rewrite the following nested if-else as a switch statement

* assume that the functions f1(), f2(), f3(), f4() exist *

```
if num < -2 || num > 4
    f1 (num)
else
    if num <= 2
        if num >= 0
            f2(num)
        else
            f3(num)
        end
    else
        f4 (num)
    end
end
```

```
switch num
    case {-2, -1}
        f3(num)
    case {0, 1, 2}
        f2 (num)
    case {3, 4}
        f4(num)
    otherwise
        f1 (num)
end
```

Write a script that will prompt the user for a character vector and print whether empty or not.

s stands for string

```
instring = input('Enter a character vector: ', 's');
if isempty(instring)
    fprintf('Not much of a character vector! \n')
else
    fprintf('Thanks!')
end
```

%c   %d   %f   %s

formatters

Is functions:
- isempty()
- isletter()
- iskeyword()
- isnumeric()

} return logical true (1) or false (0)