SECTION 3: PYTHON OBJECT AND DATA STRUCTURE BASICS, 2 hrs 2 mins, 33 parts

- **9/36 Indexing and Slicing with Strings**
    - ○ -> mystring = "Hello World"
    - ○ -> mystring
    - ○ -> mystring[0]
        - ‣ 'H'
        - ‣ print the first letter in the entire thing
    - ○ -> mystring[8] -> returns r
        - ‣ the space counts
        - ‣ indexing
    - ○ -> for the l
        - ‣ mystring[9]
        - ‣ alt. mystring[-2] -> this means 'count backwards'
        - ‣ if you didn't want to count the number of characters -> you would use len and times it by -1 etc
    - ○ -> using the length of the string
        - ‣ **-> mystring = 'abcdefghijk'**
        - ‣ **-> mystring returns it with the '''s (when you don't use print and instead just type the name of the variable which represents the str -> it returns the '''s/ """'s)**
        - ‣ -> mystring[2] -> 'c'
        - ‣ -> alt. mystring[2:] <- from the c to the end
        - ‣ -> alt. mystring[:3]
            - • 'abc'
            - • in other words, stop up to but not including that index position
        - ‣ -> mystring -> this returns the entire thing
        - ‣ -> combining the start and stop index
            - • -> mystring[3:6] <- from the 3rd to the 6th character (aka letter) in the string
            - • -> it's returning the results in '''s (it's printing the '''s)
        - ‣ **-> mystring[::] <- returns the entire thing (from the start to the end)**
            - • **-> this returns the result in '''s as well**
            - • **-> [::2] would return every second character**
            - • **-> i.e you can increase the step index etc (step size) - this can be used for manipulating data**
        - ‣ <u>**-> mystring[::-1] -> this prints out the entire thing backwards (from the beginning to the end, go backwards) -> rather than doing a for loop, e.g**</u>