

# 5 Strings

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- 5 Strings
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# **1. A string is a sequence**

## String in Topic 1

- Values in Quotation marks
- Small problem with quotation marks
- String concatenation
- String Repetition

## Bracket operator

```
>>> s = "Hello"  
>>> letter = s[1]  
>>> letter
```

Which is the value of letter

## len function

```
>>> s = "Hello"  
>>> len(s)  
5
```

# String slices

```
>>> s = "Hello, Jin!"  
>>> s[0:5]
```

## 2. Strings are immutable



### **3. String methods**

## **.strip()**

- strip all whitespaces on the left and right of a string.

**.title()**

- Capitalize the first letter of each word

**.upper()**

- Capitalize all letters

## **.split()**

- split a string into a list

## 4. Traversal with a `for` loop

## 5. Application 1: Searching

- find out whether there is a particular character in a string

## 6. Application 2: Looping and counting

- count the number of times a letter appears in a string.



## **7. Practice questions**

1. Use two `input` function twice, one for inputting first name and another one for last name. Use `.strip()` and `.title()` methods to correct user's input. Then print "Last name, First name". For example, input: " jin" as first name, "wang" as last name, the output would be "Wang, Jin".

2. Given an address, e.g., "100 Rockafeller Road, Piscataway, NJ 08854". Try to split the string, and get the information, street, city, state, zipcode.

3. Create a function, which takes a list of names and print "Hello, " together with each name. For example, taking a list, `['Mark', 'Peter', 'John']`, the function would print

```
Hello, Mark  
Hello, Peter  
Hello, John
```

4. Create a function, named `find_repetition`, to find out whether there are repetitive letters in a word. For example, For the word "Rutgers", the function returns `True` since the letter 'r' is repeated. (So it means we need to ignore the cases, 'R' is considered as a repetition of 'r'.) For the word "RBS", the function returns `False`.