Python Strings:

Strings
Strings in python are surrounded by either single quotation marks, or double quotation marks.

'hello' is the same as "hello".

You can display a string literal with the print() function:

ExampleGet your own Python Server
```
print("Hello")
print('Hello')
```
Assign String to a Variable
Assigning a string to a variable is done with the variable name followed by an equal sign and the string:

ExampleGet your own Python Server
```
a = "Hello"
print(a)
```
Multiline Strings
You can assign a multiline string to a variable by using three quotes:

ExampleGet your own Python Server
You can use three double quotes:

```
a = """Lorem ipsum dolor sit amet,
consectetur adipiscing elit,
sed do eiusmod tempor incididunt
ut labore et dolore magna aliqua."""
print(a)
```
Or three single quotes:

ExampleGet your own Python Server
```
a = '''Lorem ipsum dolor sit amet,
consectetur adipiscing elit,
sed do eiusmod tempor incididunt
ut labore et dolore magna aliqua.'''
print(a)
```
Note: in the result, the line breaks are inserted at the same position as in the code.

Strings are Arrays
Like many other popular programming languages, strings in Python are arrays of bytes

representing unicode characters.

However, Python does not have a character data type, a single character is simply a string with a length of 1.

Square brackets can be used to access elements of the string.

ExampleGet your own Python Server
Get the character at position 1 (remember that the first character has the position 0):

a = "Hello, World!"
print(a[1])
Looping Through a String
Since strings are arrays, we can loop through the characters in a string, with a for loop.

ExampleGet your own Python Server
Loop through the letters in the word "banana":

for x in "banana":
  print(x)
Learn more about For Loops in our Python For Loops chapter.

String Length
To get the length of a string, use the len() function.

ExampleGet your own Python Server
The len() function returns the length of a string:

a = "Hello, World!"
print(len(a))
Check String
To check if a certain phrase or character is present in a string, we can use the keyword in.

ExampleGet your own Python Server
Check if "free" is present in the following text:

txt = "The best things in life are free!"
print("free" in txt)
Use it in an if statement:

ExampleGet your own Python Server
Print only if "free" is present:

txt = "The best things in life are free!"

```
if "free" in txt:
  print("Yes, 'free' is present.")
```
Learn more about If statements in our Python If...Else chapter.

Check if NOT
To check if a certain phrase or character is NOT present in a string, we can use the keyword not in.

ExampleGet your own Python Server
Check if "expensive" is NOT present in the following text:

```
txt = "The best things in life are free!"
print("expensive" not in txt)
```
Use it in an if statement:

ExampleGet your own Python Server
print only if "expensive" is NOT present:

```
txt = "The best things in life are free!"
if "expensive" not in txt:
  print("No, 'expensive' is NOT present.")
```


Python String capitalize() Method:

Upper case the first letter in this sentence:

```
txt = "hello, and welcome to my world."
x = txt.capitalize()
print (x)
```

Python String casefold() Method

Make the string lower case:

```
txt = "Hello, And Welcome To My World!"
x = txt.casefold()
print(x)
```

Python String center() Method

Print the word "banana", taking up the space of 20 characters, with "banana" in the middle:

```
txt = "banana"
```

```
x = txt.center(20)
print(x)
```

Python String count() Method

Return the number of times the value "apple" appears in the string:

```
txt = "I love apples, apple are my favorite fruit"
x = txt.count("apple")
print(x)
```

Python String encode() Method

UTF-8 encode the string:

```
txt = "My name is Ståle"
x = txt.encode()
print(x)
```

Python String endswith() Method

Check if the string ends with a punctuation sign (.):

```
txt = "Hello, welcome to my world."
x = txt.endswith(".")
print(x)
```

Python String expandtabs() Method

Set the tab size to 2 whitespaces:

```
txt = "H\te\tl\tl\to"
x =  txt.expandtabs(2)
print(x)
```

Python String find() Method


```
txt = "Hello, welcome to my world."
x = txt.find("welcome")
print(x)
```

Python String format() Method

Insert the price inside the placeholder, the price should be in fixed point, two-decimal format:

```
txt = "For only {price:.2f} dollars!"
print(txt.format(price = 49))
```

Python String index() Method

```
txt = "Hello, welcome to my world."
x = txt.index("welcome")
print(x)
```

Python String isalnum() Method

Check if all the characters in the text are alphanumeric:

```
txt = "Company12"
x = txt.isalnum()
print(x)
```

Python String isalpha() Method

Check if all the characters in the text are letters:

```
txt = "CompanyX"
x = txt.isalpha()
print(x)
```

Python String isascii() Method

Check if all the characters in the text are ascii characters:

```
txt = "Company123"
x = txt.isascii()
print(x)
```

Python String isdecimal() Method

Check if all the characters in the unicode object are decimals:

```
txt = "\u0033" #unicode for 3
x = txt.isdecimal()
```

```
print(x)
```

Python String isdigit() Method

Check if all the characters in the text are digits:

```
txt = "50800"
x = txt.isdigit()
print(x)
```

Python String isidentifier() Method

Check if the string is a valid identifier:

```
txt = "Demo"
x = txt.isidentifier()
print(x)
```

Python String islower() Method

Check if all the characters in the text are in lower case:

```
txt = "hello world!"
x = txt.islower()
print(x)
```

Python String isnumeric() Method

Check if all the characters in the text are numeric:

```
txt = "565543"
x = txt.isnumeric()
print(x)
```

Python String isprintable() Method

Check if all the characters in the text are printable:

```
txt = "Hello! Are you #1?"
x = txt.isprintable()
print(x)
```

Python String isspace() Method

Check if all the characters in the text are whitespaces:

```
txt = "   "
x = txt.isspace()
print(x)
```

Python String istitle() Method

Check if each word start with an upper case letter:

```
txt = "Hello, And Welcome To My World!"
x = txt.istitle()
```

Python String isupper() Method

Check if all the characters in the text are in upper case:

```
txt = "THIS IS NOW!"
x = txt.isupper()
```

Python String join() Method

Join all items in a tuple into a string, using a hash character as separator:

```
myTuple = ("John", "Peter", "Vicky")
x = "#".join(myTuple)
print(x)
```

Python String ljust() Method

Return a 20 characters long, left justified version of the word "banana":

```
txt = "banana"
x = txt.ljust(20)
print(x, "is my favorite fruit.")
```

Python String lower() Method

Lower case the string:

```
txt = "Hello my FRIENDS"
```

```
x = txt.lower()
print(x)
```

Python String lstrip() Method

Remove spaces to the left of the string:

```
txt = "     banana     "
x = txt.lstrip()
print("of all fruits", x, "is my favorite")
```

Python String replace() Method

Replace the word "bananas":

```
txt = "I like bananas"
x = txt.replace("bananas", "apples")
print(x)
```

Python String split() Method

Split a string into a list where each word is a list item:

```
txt = "welcome to the jungle"
x = txt.split()
print(x)
```

Python String strip() Method

Remove spaces at the beginning and at the end of the string:

```
txt = "     banana     "
x = txt.strip()
print("of all fruits", x, "is my favorite")
```

Python String swapcase() Method

Make the lower case letters upper case and the upper case letters lower case:

```
txt = "Hello My Name Is PETER"
x = txt.swapcase()
print(x)
```

Python String upper() Method

Upper case the string:

```
txt = "Hello my friends"
x = txt.upper()
print(x)
```