



CoGrammar

Sequences: Strings

**SKILLS
FOR LIFE**

SKILLS BOOTCAMPS



Department
for Education

Software Engineering Lecture Housekeeping

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly.
(FBV: Mutual Respect.)
- No question is daft or silly - **ask them!**
- There are **Q&A sessions** midway and at the end of the session, should you wish to ask any follow-up questions. Moderators are going to be answering questions as the session progresses as well.
- If you have any questions outside of this lecture, or that are not answered during this lecture, please do submit these for upcoming Open Classes.
You can submit these questions here: [Open Class Questions](#)

Software Engineering Lecture Housekeeping cont.

- For all **non-academic questions**, please submit a query:
www.hyperiondev.com/support
- Report a **safeguarding** incident:
www.hyperiondev.com/safeguardreporting
- We would love your **feedback** on lectures: [Feedback on Lectures](#)

Lecture Objectives

1. Define and construct strings in Python.
2. Master key string methods for effective text manipulation in Python.
3. Effectively extract characters and substrings from strings using indexing and slicing.
4. Utilize string concatenation and formatting techniques in Python.



Poll

Assessment






Question



What string method would you use to convert a string to uppercase characters?



String Creation and Initialization

```
In[1]: message = "Welcome to Python"  
print(message)
```

Basic String Methods

"codingforfun"	Capitalize()	Codingforfun
"codingforfun"	.isalpha()	True
"54369"	.isnumeric()	True
"codingforfun"	.isupper()	False
"codingforfun"	.split()	['coding', 'for', 'fun']
"runningforfun"	.title()	Runningforfun
" coding "	.strip()	coding
"codingforfun"	.replace("d", "m")	comingforfun

Strings Are Immutable

- When an object is immutable it means the object cannot be changed.
- When we apply methods to a string that appear to make changes, they are actually creating and returning new string objects.
- This means we have to store the changes we make in a variable to be reused.



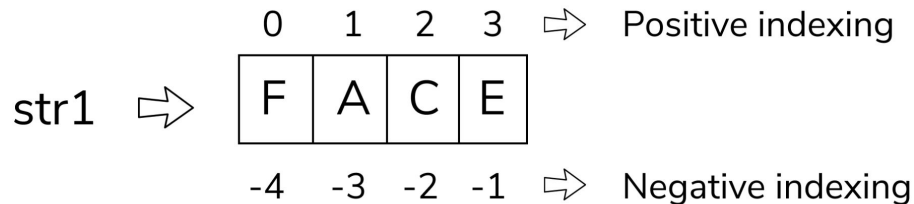
Question:

What is the difference between `upper()` and `capitalize()` method ?



String Indexing

String Slicing



`str1[1:3] = AC`

`str1[-3:-1] = AC`

String Indexing

Python

0 1 2 3 4 5

-6 -5 -4 -3 -2 -1



Challenge

How would you reverse a string using slicing ?



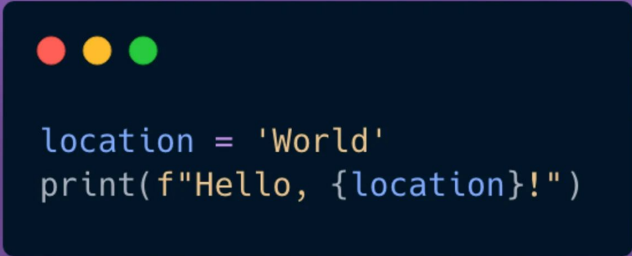
String Concatenation & Formatting

String Concatenate

`"Hello" + "World" = "HelloWorld"`

String 1 String 2 Result

f-strings and format() function




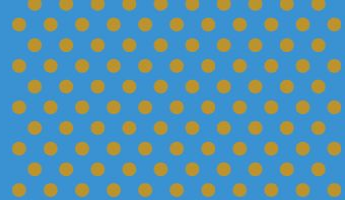
```
location = 'World'  
print(f"Hello, {location}!")
```



Challenge:

What is the result of the following expression:

```
my_string = "Hello, World"  
my_string[0:5]
```





Poll

Assessment



Wrapping Up

String Methods

Built-in functions that operate on strings, providing various functionalities such as manipulating case, finding substrings, determining length and many more.

String Indexing and Slicing

It's all about accessing characters within a string using their position and extracting a substring from a string.

String Formatting

The process of inserting values and expressions into a string to create informative output.

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Questions around Strings



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Thank you for joining

