

Working with Strings in Python: Takeaways



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Syntax

TRANSFORMING AND CLEANING STRINGS

- Replace a substring within a string:

```
green_ball = "red ball".replace("red", "green")
```

- Remove a substring:

```
friend_removed = "hello there friend!".replace(" friend", "")
```

- Remove a series of characters from a string:

```
bad_chars = ['"', ',', '.', '!']  
string = "We'll remove apostrophes, commas, periods, and exclamation marks!"  
for char in bad_chars:  
    string = string.replace(char, "")
```

- Convert a string to title cases

```
Hello = "hello".title()
```

- Strip whitespace from the beginning and end of a string:

```
clean_name = "  Margaret Hamilton  ".strip()
```

- Check a string for the existence of a substring:

```
if "car" in "carpet":  
    print("The substring was found.")  
else:  
    print("The substring was not found.")
```

- Split a string into a list of strings:

```
split_on_dash = "1980-12-08".split("-")
```

- Slice characters from a string by position:

```
last_five_chars = "This is a long string."[:5]
```

- Concatenate strings:

```
superman = "Clark" + " " + "Kent"
```

STRING FORMATTING AND FORMAT SPECIFICATIONS

- Insert a value into a string:

```
world_cup_semifinal = "The final score was Croatia {}, England {}".format(2,1)
```

- Format specification for two decimal places:

```
two_decimal_places = "I own {:.2f}% of the company".format(32.5548651132)
```

-Format specification for comma separator:

```
india_pop = "The approximate population of {} is {}".format("India",1324000000)
```

- Format specification for padding and alignment:

```
left_aligned_padded_20_chars = "| {:<20} |".format("MY_VALUE")
center_aligned_padded_20_chars = "| {:^20} |".format("MY_VALUE")
right_aligned_padded_20_chars = "| {:>20} |".format("MY_VALUE")
```

- Format specification to derive padding width from a variable:

```
left_aligned = "| {:<{}} |".format("MY_VALUE", padding_width)
```

- Order for format specification:

```
balance_string = "Your bank balance is {:>20,.2f}"].format(12345.678)
```

Concepts

- When working with comma separated value (CSV) data in Python, it's common to have your data in a 'list of lists' format, where each item of the internal lists are strings.
- If you have numeric data stored as strings, sometimes you will need to remove and replace certain characters before you can convert the strings to numeric types like `int` and `float`.
- Strings in Python are made from the same underlying data type as lists, which means you can index and slice specific characters from strings like you can lists.

- The `str.format()` method allows you to insert values into strings without explicitly converting them.
- The `str.format()` method also accepts optional format specifications which you can use to format values so they are more easily read.

Resources

- [Python Documentation: String Methods](#)
- [Python Documentation: Format Specifications](#)
- [PyFormat: Python String Formatting Reference](#)



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