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## Python string format repeat value

Python's `str.format()` method of string class allows you to perform variable replacement and value formatting. This allows you to bring elements together in a series through location formatting. This guide will guide you through some of the format's popular apps in Python, which can help make your code and programs easier to read and user-friendly. Using Formatters Formatters work by placing in one or more alternative or placing fields - defined by a pair of curly braces `{}` - into a string and calling the `str.format()`. You'll go into the value method you want to pair with the string. This value will be passed through in the same location where your placed hold is located when you run the program. Print out a string using one format: `print(Sammy has {} balloons. format(5))` OutputSammy has 5 balloons. In the example above, we built a chain with a pair of curly braces as a placeholder: `Sammy had {} balloons. We then add the str.format() method and transfer the value of inso number 5 to that method. This puts the value of 5 into the chain where the curly braces are: Sammy has 5 balloons. We can also assign a variable equal to the value of a string with a format placeer: open_string = Sammy loves {}. print(open_string.format(open source))` OutputSammy loves open source. In this second example, we connect the open source chain to the larger chain, replacing the curly braces in the original chain. The format in Python allows you to use curly braces as a placeholder for values that you will pass through using `str.format()`. Use a Format Set with Multiple Placeholders You can use multiple pairs of curly braces when using the format set. If we want to add an alternative variable to the sentence above, we can do so by adding a second pair of curly braces and insusing a second value into the method: `new_open_string = Sammy loves {}. #2 {} keeps prints (new_open_string.format) #Pass two strings into methods, spaced together by the outputsammy comma that loves open source software. To add another alternative, we added a second pair of curly braces to the original chain. Then we transfer two strings to the str.format(), separating them by commas. After the same syntax, we can add additional alternatives: sammy_string = Sammy loves {} {}, and has {} {}. #4 {} keeps prints (sammy_string.format(open source, software, 5, bubbles)) #Pass 4 strings into the outputsammy method that loves open source software and has 5 balloons. In sammy_string I added 4 pairs of curly braces as a placeholder to replace the transformation. We then transfer 4 values into the str.format(), string mixing and in nguyen inso number data types. Each of these values is divided by commas. Rearrange Formatters with Positional and Keyword Arguments When we leave brackets blank without any parameters, Python replaces values passed through method in order. As we have seen, so far, a format configuration with two hollow curly braces with two values passed down will look like this: in (Sammy the {} has a pet {}!. format(shark, pilot fish)) OutputSammy shark has a pet pilot fish! The first pair of curly braces is replaced by the chain value of the shark, and the second pair is replaced by the chain value of the pilot fish. The values that exist in this method look like this: (shark, pilot fish) They are basically the type of tuple data, and each individual value contained in the tuple can be called by its index, starting with a 0. We can pass the index numbers into curly braces that serve as place-keeping in the original sequence: in (Sammy the {0} has a pet {1}!. format(shark, fish pilot)) In the example above, the input will be what we get without turning the index index into braces as we are calling the values in cultivation in order : OutputSammy shark has a pet pilot fish! But, if we reverse the index numbers with the parameters of the placeholder, we can reverse the values passed into the chain: in (Sammy the {1} has a pet {0}!). If you call an index number 2 in a tuple value at index positions 0 and 1, then you are calling for a value that is out of range. When you call an out-of-range index number, you'll get an error message: in (Sammy the {2} has a pet {1}!. (shark, pilot fish)) OutputIndexError: tuple index out of range The error message we see refers to the tuple only valid at indicators 0 and 1, thus putting index 2 out of range. Let's add a few placeholders and a few other values to transfer to them, so we can understand how we can rearrange the formats a little better. First, here's a new sequence with four placeholders: print(Sammy is {}, {}, and {} {}!). If there are no parameters, the values passed into the str.format() method are joined to the string in order. The string values contained in the tuple correspond to the following indicators: happy smiling blue shark 0 1 2 3 Use indexes of values to change the order in which they appear in the series: print(Sammy is a {3}, {2}, and {1} {0}!). format(happy, smiling, blue, shark)) OutputSammy is a shark , blue and happy smiling! Since we start with index 3, we call the final value of the shark first. Other index numbers are included when the parameters change the order of how words appear in the original string. In addition to position esters, we can also introduce keyword parameters called by their keyword names: print(Sammy the {0} {1} a {pr}. format(shark, made, pr = pull request)) OutputSammy the shark made a pull request. Wallet this shows that use a keyword meath that is being used with position indicatorss. We can fill in pr keyword relatives along with position esters, and can move relatives around to change the result sequence: in (Sammy the {pr} {1} a {0}. format(shark, made, pr = pull request)) OutputSammy requires pulling as a shark. Location and keyword ratings are used with string formats that give us more control over manipulating our original strings through rearranged. Specify Type We can include more parameters in the curly braces of our syntax. We'll use the format code syntax {field_name:conversion}, where field_name specify the index number of the 2.format() that we went through in the rearranged and conversion section referring to the conversion code of the type of data you're using with the format. The conversion type refers to the single character type code that Python uses. The codes that we will use here are s for strings, d to display decimal insoth (10-base) and f that we will use to display floats with decimal positions. You can read more about Format-Specification Mini-Language through the official Python 3 documentation. Let's take a look at an example where we have an in-kind number passed through this method, but want to display it as a float by adding the f conversion type: print(Sammy ate {0:f} percent of a {1}!). format (75, pizza)) OutputSammy eats 75 million percent of a pizza! We used the {field_name:conversion} syntax for the field that replaced the first curly braces to export a float. The second curly brace uses only the first parameters {field_name}. In the example above, there are many numbers displayed after the tithing, but you can limit it. When you're specifying f for floating values, you can also specify the accuracy of that value by including a full stop, followed by the number of digits after the tithing you want to include. If Sammy eats 75.765367% pizza, but we do not need to have high accuracy, we can limit the places after tithing to 3 by adding 0.3 pre-type conversion f: in (Sammy eats {0:.3f} percent of a pizza!. format (75.765367)) OutputSammy eats 75.765 percent of a pizza! If we just want a tithing, we can rewwrrate the string and method as follows: print(Sammy ate {0:.1f} percent of a pizza!. format (75.765367)) OutputSammy eats 75.8 percent of a pizza! Note that modifying accuracy causes the number to be rounded. Although we display a number without a tithing position as a float, if we try to change the float to an in insus using the conversion type d, we'll get an error: print(Sammy ate {0:d} percent of a pizza!. format(75.765367)) OutputValueError: Unknown format code 'd' for object of type 'float' If you want no tithing locations displayed , you can write the format of as follows: print(Sammy ate {0:.0f} percent of a pizza!. format (75.765367)) OutputSammy eats 76 percent of a pizza! This won't convert floating to an indite, but instead limits the number of places displayed after the tithing. Because the placeper is the alternative field, you can pad or create space around a factor by increasing the field size through additional parameters. This can be useful when we need to organize a lot of visual data. We can add a number to show the field size (in terms of characters) after the colon: in the brackets of our syntax: print(Sammy has {0:4} red {1:16}!). format (5, balloons)) OutputSammy has 5 red balloons! In the example above, we gave the number 5 the character field size is 4, and the balloon string has a character field size of 16 (as it is a long string). As we see, according to the default string is justified on the left in the field and the numbers are properly proven. You can modify this by placing an alignment code immediately after the colon. &lt; left-align text in a field, ^ aligns the text in the field and &gt; aligns it right. Align numbers and center strings: print(Sammy has {0:&lt;4} red {1:^16}!). format (5, balloons)) OutputSammy has 5 red balloons! Now we see that 5 is left linked, provides space in the field before red, and balloons are concentrated in its field with space to the left and right of it. By default, when we make a larger field with formats, Python fills the field with space characters. We can modify it as another character by specifying which character we want it to be immediately after the colon: print({:^^20s}.format(Sammy)) Output*****Sammy***** We accept the string transmitted to str.format() in the index position as 0 because we do not specify the other, including the colon , and specify that we will use * instead of space to fill the field. We are centering the string with ^, specifying that the field is 20 characters in size, and also indicates that we are working with a type of string conversion by including s. We can combine these parameters with other parameters we've used before: print(Sammy ate {0:5.0f} percent of a pizza!. format (75.765367)) OutputSammy eats 76 percent of a pizza! In the parameters in the brackets, we specified the index field number of the buoy and included the colon, specified the size of the field number, and included the full stop, written in the number of positions after the decimal place, and then specified the conversion type of f. Using variables So far, we've moved in in in inso yes, floats, and strings into the str.format() method, but we can also transfer variables through this method. This works just like any other variable. nBalloons = 8 prints (Sammy has {} balloons today!). format(nBalloons)) OutputSammy has 8 balloons today! We can use variables for both the original sequence and what is transmitted into the method: sammy = Sammy has {} balloons today! = 8 in (sammy.format(nBalloons)) OutputSammy has 8 balloons today! Variables can be easily replaced for each part of our format syntax structure. This makes easier to work with when we are engaged in user-generated input and assigning values to variables. Use Formatters to organize data formats that can be seen in their best light when they are being used to organize a lot of data visually. If we're showing the database to users, using formatting to increase field size and modify alignment can make your input easier to read. Let's take a look at a typical loop in Python that will print out i, i2, and i3 between 3 and 12: for i in range (3,13): print (i, i2, i3) Head out3 9 27 4 16 64 5 25 125 6 36 216 7 49 343 8 64 512 9 81 729 10 100 1000 11 121 1331 12 144 1728 While the outing was held in a way, the numbers spill into each other's columns, making the bottom of the input less readable. If you are working with a larger data set with many small and large numbers, this can cause a problem. Use the format set to provide more space for these numbers: for i in range(3,13): print({:3d} {:4d} {:5d}).format(i, i2, i3) Here, in our curly braces, we didn't add field names to index numbers and started with colons, followed by numbers for field size and conversion type d because we were working with ins inso number. In this example, we provide accommodation for the size of each expected input, for an additional 2 character spaces per, depending on the maximum possible number size, so our outs come out looks like this: Head out 3 9 27 4 16 64 5 25 125 6 36 216 7 49 343 8 64 512 9 81 729 10 1000 11 121 1331 12 144 1728 We can specify a number of consistent field sizes for even columns, ensuring that we contain larger numbers: for i in range(3,13): print({:6d} {:6d} {:6d}).format(i, i2, i3) Out 3 9 27 4 16 64 5 25 125 6 36 216 7 49 343 8 64 512 9 81 729 10 100 1000 11 121 1331 12 144 1728 it is also possible to align columns by adding &lt;, ^, and &gt;; to align text, change d to f to add a tithing position, change the field name index number, and more to make sure that we're displaying the data as you like. Conclusion Use formatting to replace variables can be an effective way to string and organize values and data. The format represents a simple but unscripted way to go through instead turning into a string, and is useful to ensure the input is readable and user-friendly. Friendly.`

