

Python Programming

String Formatting 1

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String formatting

- Typically you need to print a message that involve values
 - Please enter a number from 1 to 5 (5 is number of menu choices)
 - Mostafa age is 33 and salary is 1000 (we have 3 variables: mostafa, age, 1000)
- We can do that with what we learned so far, but not great enough
- String formatting is about having some template/structure to make it easier
- There are 3 ways for that
 - **Modulus operator**: old - avoid, but u will read in legacy codes
 - **Replacements Fields** - ok, but avoid for verbose outputs
 - **F-string** - the modern way to go
- We will highlight the most common features, but there are a lot of details
 - Future [reading](#)
- Tip: Stop one by one and try!

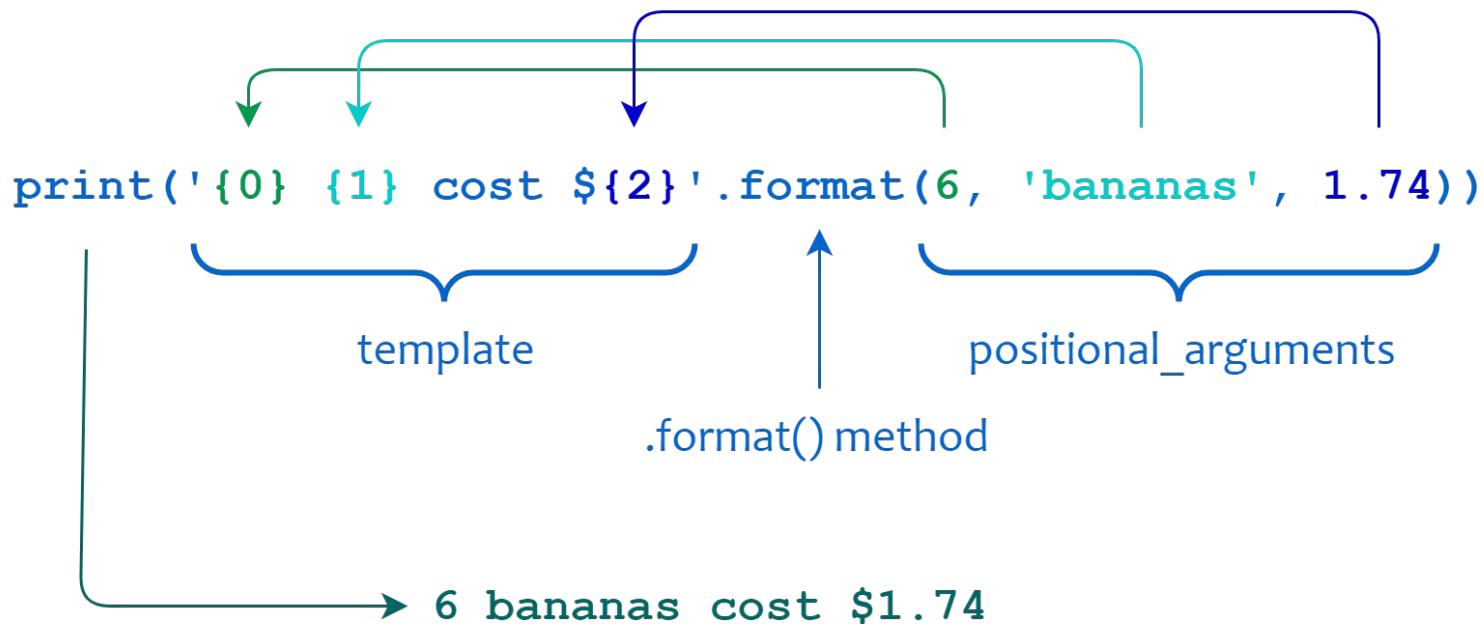
Replacements Fields

[illegible]

Replacements Fields

```
1
2 name, age = 'mostafa', 33
3
4 print('{0} is {1} years old'.format(name, age)) ... # mostafa is 33 years old
5
6 #print('{0} is {2} years old'.format(name, age)) ... # IndexError - no idx 2
7
8 print('{0} is {1} years old. Are you {1} years as {0}'.format(name, age))
9 # mostafa is 33 years old. Are you 33 years as mostafa
10 # pros: you provide positional argument once and use it many
11
12 print('{name} is {AGE} years old. Are you {AGE} years as {name}'.format(name=name, AGE=age))
13 # mostafa is 33 years old. Are you 33 years as mostafa
14 # similarly, we can use keyword arguments but flexible order!
15
16 # Be careful from mixing
17 print('{} is {age} years old'.format(name, age=age)) ... # mostafa is 33 years old
18 print('{0} is {age} years old'.format(name, age=age)) ... # mostafa is 33 years old
19
20 #print('{1} is {age} years old'.format(age=age, name))
21 # SyntaxError: positional argument follows keyword argument
22 #print('{1} is {age} years old'.format(name, age=age)) ... # IndexError
```

Replacements Fields



Replacements Fields

```
2 # {[<name>][!<conversion>][:<format_spec>]}
3 # Python has too many details in these parts
4 # https://realpython.com/python-formatted-output/
5
6 my_lst = ['mostafa', 33, 1000]
7
8 print('{lst[0]} is {lst[1]} years old with salary {lst[2]}'.format(lst = my_lst))
9 # mostafa is 33 years old with salary 1000
10
```

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”