Python String

- In Python, strings are arrays of bytes representing Unicode characters.
- 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.
- Strings in Python can be created using single quotes or double quotes or even triple quotes.

```
# Python Program to Access characters of String
# Retrieved from https://www.geeksforgeeks.org/python-strings/

String1 = "GeeksForGeeks"
print("Initial String: ")
print(String1)

# Printing First character
print("\nFirst character of String is: ")
print(String1[0])

# Printing Last character
print("\nLast character of String is: ")
print(String1[-1])

# Printing 3rd to 12th character
print("\nSlicing characters from 3-12: ")
print(String1[3:12])

# Printing characters between
# 3rd and 2nd last character
print("\nSlicing characters between " +
    "3rd and 2nd last character: ")
print(String1[3:-2])
```

Output:

```
Initial String:
GeeksForGeeks

First character of String is:
G

Last character of String is:
s

Slicing characters from 3-12:
ksForGeek

Slicing characters between 3rd and 2nd last character:
ksForGee
```

In Python, Updating or deleting of characters from a String is not allowed.

```
# Python Program to Update character of a String
String1 = "Hello, I'm a Geek"
print("Initial String: ")
print(String1)

# Updating a character
# of the String
String1[2] = 'p'
print("\nUpdating character at 2nd Index: ")
print(String1)
```

Traceback (most recent call last):
File "/home/360bb1830c83a918fc78aa8979195653.py", line 10, in
String1[2] = 'p'
TypeError: 'str' object does not support item assignment

Formatting of Strings

```
# Python Program for Formatting of Strings

# Default order
String1 = "{} {} {}".format('Geeks', 'For', 'Life')
print("Print String in default order: ")
print(String1)

# Positional Formatting
String1 = "{1} {0} {2}".format('Geeks', 'For', 'Life')
print("\nPrint String in Positional order: ")
print(String1)

# Keyword Formatting
String1 = "{l} {f} {g}".format(g = 'Geeks', f = 'For', l =
'Life')
print("\nPrint String in order of Keywords: ")
print(String1)

# Formatting of Integers
String1 = "{0:b}".format(16)
print("\nBinary representation of 16 is ")
print(String1)

# Formatting of Floats
String1 = "{0:e}".format(165.6458)
print("\nExponent representation of 165.6458 is ")
print(String1)

# Rounding off Integers
String1 = "{0:.2f}".format(1/6)
print("\none-sixth is : ")
print(String1)

# String alignment
String1 = "|{:<10}|{:^10}|{:>10}|".format('Geeks','for','Geeks')
print("\nLeft, center and right alignment with Formatting: ")
print(String1)
```

Output

```
Print String in default order:
Geeks For Life
```

Print String in Positional order:
For Geeks Life

Print String in order of Keywords:
Life For Geeks

Binary representation of 16 is
10000

Exponent representation of 165.6458 is
1.656458e+02

one-sixth is :
0.17

Left, center and right alignment with Formatting:
|Geeks | for | Geeks|

String Functions
https://www.geeksforgeeks.org/python-strings/