strings_demo

April 21, 2024

""" define string """

[2]:
```
work = "information technology institute"
```

[3]:
```
"1- get len of the string "
print(len(work))
```

```
32
```

[4]:
```
"2- slicing string "
print(work[2:5])
```

```
for
```

[5]:
```
print(work[6:])
```

```
ation technology institute
```

[6]:
```
print(work[::])
```

```
information technology institute
```

[7]:
```
print(work[::-1])
```

```
etutitsni ygolonhcet noitamrofni
```

[8]:
```
print(work[::2])
```

```
ifraintcnlg nttt
```

[9]:
```
"""count char occurrence in string """
print(work.count("i"))
```

```
4
```

[10]:
```
""" access char at index """
print(work[10])
```

```
n
```

[11]:
```
"""get index of char"""
```

```
print(work.index("i"))  # first occurrence
```

```
0
```

String is immutable datatype

[12]:
```
""" convert string --> upper lower // title // capitalize --> return new string␣
↪"""

name = 'ahmed mohamed'
```

[16]:
```
print(name.upper())
print(name.lower())
print(name.title())
print(name.capitalize())
```

```
AHMED MOHAMED
ahmed mohamed
Ahmed Mohamed
Ahmed mohamed
```

[17]:
```
""" string concat"""
message = 'hello'
message2 = 'Ghaza'
year = 2024
message3 = message + message2
print(message3)
```

```
helloGhaza
```

check this

[20]:
```
message4 =  message + message2 + str(year)
print(message4)
```

```
helloGhaza2024
```

“ ““format string”“ ”

[21]:
```
no_of_students = 13
course = "python"
info = "we have {0} student in {1} course"   # define template
print(info)
```

```
we have {0} student in {1} course
```

[22]:
```
print(info.format(no_of_students, course))
```

```
we have 13 student in python course
```

[23]:
```
print(info.format(13 , "mongo"))
```

```
we have 13 student in mongo course
```

[24]:
```
print(info.format(course, no_of_students))
```

```
we have python student in 13 course
```

keyword template

[25]:
```
info = "we have {studentsnumber} student in {coursename} course"
print(info)
```

```
we have {studentsnumber} student in {coursename} course
```

[26]:
```
# format using keyword argument
print(info.format(coursename='mongo', studentsnumber='25'))
```

```
we have 25 student in mongo course
```

“ “ ” f-format string —> format string based on existing variables in memory” “ ”

[29]:
```
fname = 'noha'
midname = 'Abdelhady'
lname=  'shehab'
fullname = f"My name is {fname} {midname} {midname} {lname}"
print(fullname)
```

```
My name is noha Abdelhady Abdelhady shehab
```

[30]:
```
""" interpolation"""
fullname = f"{fname} {midname*2} {lname}"
print(fullname)
```

```
noha AbdelhadyAbdelhady shehab
```

[31]:
```
""" loop over the string """
name = 'noha'
for abbass in name:
    print(f"char: {abbass}")
```

```
char: n
char: o
char: h
char: a
```

[32]:
```
"check if char exists in string"
print("n" in name)
```

```
True
```

[33]:
```
""" strip string """
message = "      Hello world           "
print(len(message))
```

```
print(message)
```

```
28
      Hello world
```

“remove spaces in one line -from the beginning/ end of the string -”

[37]:
```
print(message.strip(), len(message.strip()))
print(message.lstrip(),len(message.lstrip()))
print(message.rstrip(), len(message.rstrip()))
```

```
Hello world 11
Hello world            22
      Hello world 17
```

[44]:
```
message= "   @ hello world @    @"
print(message)
print('.',message.strip("@"),'.')  # strip @ from beginning and end of the␣
 ↪string
print(f'#{message.strip(" @do")}#')
```

```
   @ hello world @    @
.    @ hello world @     .
#hello worl#
```

“remove char from inside the string ?”

[48]:
```
message ="hello world o o o o o "
print(message.replace("o", ""))
print(message.replace("o", "@")) # replace all occurrences of the char
print(message.replace("o", "@", 1))
```

```
hell wrld
hell@ w@rld @ @ @ @ @
hell@ world o o o o o
```

“ “ ” ask use to enter string “ “ ”

[49]:
```
name = input("please enter your name : ")    # return with string
print(name , type(name))
```

```
noha <class 'str'>
```

calculator

[53]:
```
num1 = input("please enter first number")
num2=  input("please enter second number")
# res = int(num1) + int(num2)
# print(res)
```

Examine string content

[54]:
```
""" examine string content before using ---. """
print("isdigit:", num1.isdigit())  # return true --> string contains digits␣
↪(int)
```

```
isdigit: True
```

[55]:
```
print("is alpha:", num2.isalpha())  # true  --> string  --> a-z
```

```
is alpha: True
```

[56]:
```
print("isupper: ",num1.isupper())
```

```
isupper:  False
```

[57]:
```
print("islower: ",num2.islower())
```

```
islower:  True
```

[ ]:
```
# strr = 'noha' ==> 'nh'
# iti --> 0,2

"""
    3
    [
        [1],
        [2, 4],
        [3, 6,9]
    ]

    DON't use chatgpt, google gemini -> any online solution to solve the lab
"""
```