```python
# defining strings:
name = "mahdi" # double quotations can be used
name2 = 'mahdi' # single quotations can be used

print(name2)

# to define multiple lines string:
fullName = '''batoul
diab'''
fullName2 = """batoul
diab"""
print(fullName)

# length of string
word = "hello"
l = len(word)
print(l) # prints: 5
print(len(word)) # prints: 5

print(len("hello world")) # a space is considered a char # prints: 11


# selecting character by its index. remember, indices start with 0
name = "hello"
print(name[0]) # prints: h

word = 'hello'
first_char = word[0]
print(first_char) # prints: h

# Slicing
a = "hello world"
# the character on the right is not included in the slice
# the character on the left is included in the slice
# the negative index is counted from the end of the string
print(a[2:7]) # output: hello
print(a[:8])
print(a[2:]) # output: llo world
print(a[-5:-2]) # output: wor
print(a[-1])
print(a[-5:]) # output: world

# modifying
name = "Batoul"
print(name.upper()) # prints: BATOUL
print(name.lower()) # prints: batoul

# strip string: remove spaces in the beginning or end of a string
name = " batoul diab "
name = name.strip()
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print(name)

#replace characters
name = 'batboul'
print(name.replace("ba","cz")) # prints: cztboul

# split string:
txt = "hello, batoul diab"
print(txt.split(" ")) # prints: ['hello,', 'batoul', 'diab']

# concatinating
print(name + ' ' + txt)

# checking if substring is present in a string
name = "batoul diab"
print("batoul" in name) # fiye 7ot string kbir # prints: True
print("z" in name) # fiye 7ot single character # prints: False
print("B" in name) # prints: False

splittedTxt = txt.split("l") # prints: ['he','','o, batou', ' diab']
print(splittedTxt)
print('hello' in splittedTxt)

print("z" not in name) # prints: True
print("batoul" not in name) # prints: False


# application 1 on strings
name = "baToUL"
firstLetter = name[0].upper()
rest = name[1:].lower()
name =firstLetter+rest
print(name)

# second solution
name = "baToUL"
firstLetter = name[0]
firstLetter = firstLetter.upper()
rest = name[1:]
rest = rest.lower()
name =firstLetter + rest
print(name)

# third solution
name = "baToUL"
print(name[0].upper() + name[2:].lower())

# Format a string
age = 20
txt = " his age is " + str(age) # this is a way to get string with number
variable in it
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101
102 txt2 = f"his age is {age}" # {age} is replaced with variable age. don't forget
    the f in the beginning
103 print(txt2)
104
105 price = 20.12345
106 txt = f"price is: {price:.3f}" # this gets the number with 3 digits after the
    decimal point
107 print(txt)
108
109
110
111 txt = f"price doubled is: {price*2}" # we can make operations in the formating
112 print(txt)
113
114 price_dollar = 20
115 priceLL = f"price is {price_dollar*90000} L.L"
116 print(priceLL)
117
118 priceLL = 800000
119 price_dollar = f"price is {priceLL/90000:.2f} dollars"
120 print(price_dollar)
121
122
123 print(f"price is {1000000/90000:.2f} dollars")
124
125 # to print qoutaions in the quotaions of the string, one way is that they must
    not be similar
126 txt = 'My name is "Batoul"' # outer quotations for string declaration are
    single, inner are double
127 # backslash makes the single quotation considered as string character not as
    python syntax
128 txt = 'It\'s "Batoul"'
129 print(txt)
130
131 # \n is inserted in the strings where we want to start a new line
132 word1 = "hi"
133 word2 = "welcome"
134 txt = word1 + "\n" + word2
135 print(txt)
136
137 sentence = "hi\nbatoul"
138 print(sentence)
139
140 # \t is inserted in the strings where we want to add a tab (number of spaces)
141 paragraph = """\tthis is a
142 multiline paragraph"""
143
144 print(paragraph)
145
146 name = "batOUL"
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147 print(name.capitalize()) # this make the first letter capital (upper case) and
    others letters lower case.
148
149 txt = "this is a text."
150 print(txt.count("is")) # counts how many times the 'is' string appeared in the
    string
151 print(txt.endswith(".")) # checks if the string ends with '.' . we can replace
    '.' with any string value.
152
153 # check in numeric
154 txt = "10"
155 print(txt.isnumeric()) # only this will give true
156 txt = "a"
157 print(txt.isnumeric())
158 txt = "a10"
159 print(txt.isnumeric())
160 txt = " 2"
161 print(txt.isnumeric())
162 txt = "10a"
163 print(txt.isnumeric())
164
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