Strings2

```
# Quizzes

# + and *

"Rahul" + "Rahul"
```

```
'RahulRahul'
```

```
"Rahul" * 2
```

```
'RahulRahul'
```

```
# "Rahul" / 2

print(ord('A'))
```

```
65
```

Pattern

```
# The sigma way to print the pattern:

# # # # #
# # # # #
# # # # #
# # # # #
# # # # #

# Quiz

for i in range(5):
    print("#", end=" ")
print()

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print()

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```

```
print()

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    print("#", end=" ")
print()

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    print("#", end=" ")
print()

# # # # #
# # # # #
# # # # #
# # # # #
# # # # #

# Using nested for loop

for i in range(5):
    for i in range(5):
        print("#", end=" ")
    print()

# # # # #
# # # # #
# # # # #
# # # # #
# # # # #

print("# "*5)
print("# "*5)
print("# "*5)
print("# "*5)
print("# "*5)

# # # # #
# # # # #
# # # # #
# # # # #
# # # # #

for i in range(5):
    print("# "*5)

# # # # #
# # # # #
# # # # #
# # # # #
# # # # #
```

```
n = int(input())
for i in range(n):
    print("# " * n)
```

```
 3
```

```
# # #
# # #
# # #
```

Formatted strings

```
# intro please :)

name = "Emma Watson"
age = 32

print("Hey my name is", name, ".", "and my age is", age, ".")
```

```
Hey my name is Emma Watson . and my age is 32 .
```

```
# 1st method

# format

# quiz

name = input()
age = int(input())

print("Hey my name is {} and my age is {}".format(name, age))
```

```
 Rahul
 45
```

```
Hey my name is Rahul and my age is 45
```

```
name = input()
age = int(input())

print("Hey my name is {} and my age is {}".format(age, name))
```

```
 rahul
 25

Hey my name is 25 and my age is rahul



# Quiz

# print("Hey my name is {}, and my age is {}.".format(age))




# latest way of writing formatted strings
# Following is aplicable in python 3.6 and above



# 2nd Method

# formatted strings

name = input()
age = int(input())

print(f"Hey my name is {name} and my age is {age}")

 emma
 32

Hey my name is emma and my age is 32



name = "Emma"
age = 32
print(f"Hey my name is {} and my age is {age}")

  File
"/var/folders/zn/hkv6562d6_d30glfs8yc76900000gn/T/ipykernel_55028/6999
40393.py", line 3
    print(f"Hey my name is {} and my age is {age}")
                                                  ^
SyntaxError: f-string: empty expression not allowed
```

Challenge: For a given string find length without using len function

```
s = input()
```

```
 Rahul janghu
```

```
len(s)
```

```
12
```

```
count = 0
for i in s:
    count += 1
    #print(i)
print(count)
```

```
12
```

Challenge:

- Given a string as input, count the no of upper case characters

```
name = "RAHul Janghu"

# ord('A')

for i in name:
    if ord(i) >= 65 and ord(i) <= 90:
        print(i)
```

```
R
A
H
J
```

```
count = 0
for i in name:
    if ord(i) >= 65 and ord(i) <= 90:
        count += 1
        print(i, count)
```

```
R 1
A 2
H 3
J 4
```

```
# isupper() and upper()
```

```
"a".isupper()
```

```
False
```

```
"A".isupper()
```

```
True
```

```
count = 0
for i in name:
    if i.isupper():
        count += 1
print(count)
```

```
4
```

```
"AA".isupper()
```

```
True
```

```
"Aa".isupper()
```

```
False
```

```
print("a".upper())
```

```
A
```

```
print("b".upper())
```

```
B
```

```
print("rahul".upper())
```

```
RAHUL
```

Challenge:

- Convert the string to lower case.
- Input: "INdiA" Output: "india"

```
# using loop
```

```
name = "RAHul"
```

```
for i in name:
    if ord(i) >= 65 and ord(i) <= 90:
        asci = ord(i) + 32
        print(chr(asci))
    else:
        print(i)
```

```
r
a
h
u
l
```

```
name = "RAHUL"
```

```
new = ""
for i in name:
    # Here we are converting to corresponding small case
    if ord(i) >= 65 and ord(i) <= 90:
        asci = ord(i) + 32
        new += chr(asci)
    else:
        new += i
```

```
print(new)
```

```
rahul
```

```
# lower and islower
```

```
# using isupper and islower
```

```
name
```

```
'RAHUL'
```

```
for i in name:
    if i.isupper():
        print(i.lower())
```

```
r
a
h
u
l
```

```
"A".lower()
```

```
'a'
```

```
# lower
```

```
name
```

```
'RAHUL'
```

```
print(name.lower())
```

```
rahul
```

Challenge:

Write a program which accepts two strings s1 and s2 and checks if s2 is a substring of s1.

```
# in operator
```

```
# using for loop
```

```
s1 = input()
s2 = input()
```

```
 Rahul
 g
```

```
print(s2 in s1)
```

```
False
```

```
"Ra" in "rahul"
```

```
False
```

Challenge

Write the code for a Python function expand(x) that takes a list of strings, concatenates them, and returns the resulting string repeated three times.

Example 1:

Input: ['string1', 'string2']

Output: 'string1string2string1string2string1string2'

Example 2:

Input: ['a', 'b', 'c']

Output: 'abcabcabc'

```
# quiz

# split?

# using for loop

s = "1 2 3 4"
print(s.split())
```

```
['1', '2', '3', '4']
```

```
s = input().split()
print(s)
```

```
 string1 string2
```

```
['string1', 'string2']
```

```
new = ""
for i in s:
    new += i
print(new*3)
```

```
string1string2string1string2string1string2
```

```
# join function

name = "Rahul"

print(".".join(name))
```

```
R.a.h.u.l
```

```
print("-".join(name))
```

```
R-a-h-u-l
```

```
print("".join(name))
```

```
Rahul
```

```
s
```

```
['string1', 'string2']
```

```
print(".".join(s))
```

```
string1.string2
```

```
# quiz
```

```
n = ['string1', 'string2']
print("Rahul".join(n))
```

```
string1Rahulstring2
```

```
print("".join(n))
```

```
string1string2
```

```
print("".join(n)*3)
```

```
string1string2string1string2string1string2
```

```
## Check if a string is purely alphabetic?
# 1. "RahulJanghu"
# 2. "Rahul Janghu"
# 3. "RahulJanghu01"
```

```
s = "RahulJanghu"
```

```
print(s.isalpha())
```

```
True
```

```
print("Rahul Janghu".isalpha())
```

```
False
```

```
print("RahulJanghu01".isalpha())
```

```
False
```

```
# join
# isalpha
# isdigit
# islower
# isupper
# isspace
# lower
# upper
```

```
# isdigit()
```

```
print("2".isdigit())
```

```
True
```

```
print("2a".isdigit())
```

```
False
```

```
# isspace()
```

```
print(" a".isspace())
```

```
False
```

```
print("".isspace())
```

```
False
```

```
print("  ".isspace())
```

```
True
```

Challenge

Given a string count number of digits in a string

```python
s = "Rah1h2 7 h"

for i in s:
    # check for digits
    if i.isdigit():
        print(i)
```

```
1
2
7
```

```
# More patterns?

#
##
###
####
```

```
####
###
##
#
```

```
####
 ###
  ##
   #
```

List comprehension

```
# same as
```

```
# add square of all numbers from 1 to 10
```