Intro to 'Strings'

- Inbuilt Functions:
- len
- capitalize
- title
- count
- replace
- split

```python
# Quiz

# ord function prints corresponding int value

ord('a')

97

ord('y')

121

ord('z')

122

ord('A')

65

ord('Z')

90

# chr function is used to get the character value associated with integer

chr(97)

'a'

chr(65)

'A'




# len
```

```python
# quiz
s = "Rahul Janghu"
s = "rahul janghu"
len(s)
12
# white spaces are also included



# capitalize
s
'rahul janghu'
s.capitalize()
'Rahul janghu'




# title
s
'rahul janghu'
s.title()
'Rahul Janghu'




# count
# quiz
s
'rahul janghu'
```

```python
s.count('A')
```
```
0
```
```python
s.count('a')
```
```
2
```

```python
# replace
# replace(old, new)
s = 'rahul janghu'
print(id(s))
```
```
140659669759280
```
```python
s = s.replace('a', 'A')
s
```
```
'rAhul jAnghu'
```
```python
print(id(s))
```
```
140659667461936
```
```python
# This is power of immutability
s.replace('ra', 'Ra')
```
```
'Rahul janghu'
```

```python
# split
s = 'rahul janghu'
li = s.split()
print(li, type(li))
```
```
['rahul', 'janghu'] <class 'list'>
```
```python
# by default split breaks around spaces
```

```python
# s.split?

s

'rahul janghu'

s.split('a')

['r', 'hul j', 'nghu']

s.split('A')

['rahul janghu']

i = '2 3 4 5 6'

i.split()

['2', '3', '4', '5', '6']
```

Challenge: Warmup
- Given a string as input, print it 3 times without any space. (can't use a loop)
- Input: "India"
- Ouput: "IndiaIndiaIndia"

```python
# String concatenation

# +, *

country = input()
n = int(input())

 India
 3

print(country * n)

IndiaIndiaIndia


print(country)

India

"rahul" + "rahul" + "rahul"
```

```
'rahulrahulrahul'
```

```python
# Quiz
city = "Phoenix"
print(len(city*3))
```
```
21
```
```python
city*3
```
```
'PhoenixPhoenixPhoenix'
```

Challenge 1:
- Take a string as input and print all the characters in a newline.
- Input: "India"
- Output:
- I
- n
- d
- i
- a

```python
# strings are iterable

country = input()
for i in country:
    print(i)
```
```
 India

I
n
d
i
a
```
```python
for i in country:
    print(i, end=" ")
```
```
I n d i a
```
```python
for i in range(len(country)):
    print(country, end="")
```
```
IndiaIndiaIndiaIndiaIndia
```

Challenge 2:

- Given a string as input, print the first and the last character of the string.
- Input: "India"
- Output:
- I
- a

```
# Indexing

country

'India'

print(country[0])
print(country[-1])

I
a

country[-1]

'a'

s

'rahul janghu'

len(s)

12

for i in range(len(s)):
    # i is the index of string s
    print(s[i], i)

r 0
a 1
h 2
u 3
l 4
  5
j 6
a 7
```

```
n 8
g 9
h 10
u 11
```

Challenge Palindrome

```python
# Quiz

s1 = 'radar'
s2 = 'level'
s3 = 'rahul'

print(s3[::-1])

luhar

# for rev use slicing: [::-1]

s = input()
rev = s[::-1]

# if rev is s then it's a pallindrome

print(s == rev)

 Level

False




# Hw: Check this using iteration
```

Challenge 3:

- Take a string as input and print the ASCII value of the characters in it.

```python
# ord

# chr

name = input()

for i in name:
    print(i, ord(i))
```

```
 Rahul

R 82
a 97
h 104
u 117
l 108
```

Challenge: Last

Given a string convert all caps alphabets into small

```python
name = "RaHul"

for i in name:
    # check for caps alphabet range
    if ord(i) >= 65 and ord(i) <= 90:
        asc = ord(i) + 32
        print(asc)
        print(chr(asc))
```

```
114
r
104
h
```

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

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


# Doubts
```