Python Programming

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STRINGS IN PYTHON - II

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Learning Mantra

If you really strong in the basics, then remaining things will become so easy.

Agenda:

1. Joining of Strings.
2. Changing case of a String.
3. Checking starting and ending part of the string.
4. Checking the type of characters present in a string.
5. Formatting the Strings.

Joining of Strings:

- We can join a group of strings(list or tuple) with respect to the given separator.

Syntax :

s=seperator.join(group of strings)

Eg:

```
t=('sunny','bunny','chinny')
s='-'.join(t)
print(s)        ➔sunny-bunny-chinny
```

Eg:

```
l=['hyderabad','singapore','london','dubai']
s=':'.join(l)
print(s)
```

➔hyderabad:singapore:london:dubai

```
l=['hyderabad','singapore','london','dubai']
s=''.join(l)
print(s)
```

➔hyderabadsingaporelondondubai

```
l=['hyderabad','singapore','london','dubai']
s=' '.join(l)
print(s)
```

➔hyderabad singapore london dubai

Changing case of a String:

We can change case of a string by using the following methods.

1. upper() ➔ To convert all characters to upper case
2. lower() ➔ To convert all characters to lower case
3. swapcase() ➔ converts all lower case characters to upper case and all upper case characters to lower case
4. title() ➔ To convert all characters to title case. i.e., first character in every word should be upper case and all remaining characters should be in lower case.
5. capitalize() ➔ Only first character will be converted to upper case and all remaining characters can be converted to lower case.

Eg:

s='learning Python is very Easy'

print(s.upper()) ➔ LEARNING PYTHON IS VERY EASY

print(s.lower()) ➔ learning python is very easy

print(s.swapcase()) ➔ LEARNING pYTHON IS VERY eASY

print(s.title()) ➔ Learning Python Is Very Easy

print(s.capitalize()) ➔ Learning python is very easy

Eg : Convert the uppercase characters into lowercase and remove spaces.

```
s='Learning Python Is Very Easy'
s = s.lower().replace(' ','')
print(s)
```
➔ learningpythonisveryeasy

 # Above example with join() & split() functions

```
s='Learning Python Is Very Easy'
s = s.lower()
s1 = s.split()
s = ''.join(s1)
print(s)
```
➔ learningpythonisveryeasy

Checking starting and ending part of the string:

Python contains the following methods for this purpose:

1. s.startswith(substring)
2. s.endswith(substring)

Eg:

```
s='learning Python is very easy'
print(s.startswith('learning'))    ➔True
print(s.endswith('learning'))      ➔False
print(s.endswith('easy'))          ➔True
```

Checking the type of characters present in a string:

Python contains the following methods for this purpose.

1) isalnum(): Returns True if all characters are alphanumeric(a to z , A to Z ,0 to9)

2) isalpha(): Returns True if all characters are only alphabet symbols(a to z , A to Z)

3) isdigit(): Returns True if all characters are digits only(0 to 9)

4) islower(): Returns True if all characters are lower case alphabet symbols

5) isupper(): Returns True if all characters are upper case alphabet symbols

6) istitle(): Returns True if string is in title case

7) isspace(): Returns True if string contains only spaces

Note : We can't pass any arguments to these functions.

Eg:

print('Karthidurga786'.isalnum()) ➔True

print('Karthidurga786'.isalpha()) ➔False

print('Karthi'.isalpha()) ➔True

print('karthi'.isdigit()) ➔False

print('786786'.isdigit()) ➔True

print('abc'.islower()) ➔True

print('Abc'.islower()) ➔False

print('abc123'.islower()) ➔True

print('ABC'.isupper()) ➔True

print('Learning python is Easy'.istitle()) ➔False

print('Learning Python Is Easy'.istitle()) ➔True

print(‘ '.isspace()) ➔True

Demo Program:

```
s=input("Enter any character:")
if s.isalnum():
    print("Alpha Numeric Character")
    if s.isalpha():
        print("Alphabet character")
            if s.islower():
                print("Lower case alphabet character")
            else:
                print("Upper case alphabet character")
    else:
        print("it is a digit")
elif s.isspace():
    print("It is space character")
else:
    print("Non Space Special Character")
```

```
Enter any character:7
Alpha Numeric Character
it is a digit
```

Demo Program:

```
s=input("Enter any character:")
if s.isalnum():
    print("Alpha Numeric Character")
    if s.isalpha():
        print("Alphabet character")
            if s.islower():
                print("Lower case alphabet character")
            else:
                print("Upper case alphabet character")
    else:
        print("it is a digit")
elif s.isspace():
    print("It is space character")
else:
    print("Non Space Special Character")
```

```
Enter any character:a
Alpha Numeric Character
Alphabet character
Lower case alphabet character
```

Demo Program:

```
s=input("Enter any character:")
if s.isalnum():
    print("Alpha Numeric Character")
    if s.isalpha():
        print("Alphabet character")
            if s.islower():
                print("Lower case alphabet character")
            else:
                print("Upper case alphabet character")
    else:
        print("it is a digit")
elif s.isspace():
    print("It is space character")
else:
    print("Non Space Special Character")
```

```
Enter any character:A
Alpha Numeric Character
Alphabet character
Upper case alphabet character
```

Demo Program:

```
s=input("Enter any character:")
if s.isalnum():
    print("Alpha Numeric Character")
    if s.isalpha():
        print("Alphabet character")
            if s.islower():
                print("Lower case alphabet character")
            else:
                print("Upper case alphabet character")
    else:
        print("it is a digit")
elif s.isspace():
    print("It is space character")
else:
    print("Non Space Special Character")
```

```
Enter any character:
It is space character
```

Demo Program:

```
s=input("Enter any character:")
if s.isalnum():
    print("Alpha Numeric Character")
    if s.isalpha():
        print("Alphabet character")
            if s.islower():
                print("Lower case alphabet character")
            else:
                print("Upper case alphabet character")
    else:
        print("it is a digit")
elif s.isspace():
    print("It is space character")
else:
    print("Non Space Special Character")
```

```
Enter any character:$
Non Space Special Character
```

Formatting the Strings:

- We can format the strings with variable values by using replacement operator {} and format() method.

Eg:

```
name='karthi'
salary=100000
age=6
print("{} 's salary is {} and his age is {}".format(name,salary,age))
print("{0} 's salary is {1} and his age is {2}".format(name,salary,age))
print("{x} 's salary is {y} and his age is {z}".format(z=age,y=salary,x=name))
```

Output:

```
karthi 's salary is 100000 and his age is 6
karthi 's salary is 100000 and his age is 6
karthi 's salary is 100000 and his age is 6
```

Any question?

If you try to practice programs yourself, then you will learn many things automatically

Spend few minutes and then enjoy the study

Thank You