06/10/2025

Dictionary

A Dictionary in Python is an unordered, mutable, and indexed collection that stores data in key–value pairs.

Each key in a dictionary must be unique, while values can be duplicated.

Dictionary is represented by:

1. dict()
2. {key:value}

Creating dictionary

pdata={'name':'tanu','ph no':'9678563421','place':'tiptur'}

pdata

o/p:

{'name': 'tanu', 'ph no': '9678563421', 'place': 'tiptur'}

Accessing keys

pdata.keys()

o/p:

dict_keys(['name', 'ph no', 'place'])

Accessing values

pdata.values()

o/p:

dict_values(['tanu', '9678563421', 'tiptur'])

Adding a new key-value pair

pdata['email']='tanuhm27.15@gmail.com'

pdata

o/p:

{'name': 'tanu',

'ph no': '9678563421',

'place': 'tiptur',

'email': 'tanuhm27.15@gmail.com'}

Updating dictionary

pdata['place']='bengaluru'

pdata

o/p:

{'name': 'tanu',

'ph no': '9678563421',

'place': 'bengaluru',

'email': 'tanuhm27.15@gmail.com'}

Removing elements from dictionary

pdata.pop('ph no')

pdata

o/p:

{'name': 'tanu', 'place': 'bengaluru', 'email': 'tanuhm27.15@gmail.com'}

pdata.popitem() # removes last inserted item

pdata

o/p:

{'name': 'tanu'}

String

A String in Python is a sequence of characters enclosed in single (' '), double (" "), or triple quotes (''' ''').

It is ordered, indexed, and immutable, meaning once created, it cannot be modified directly.

You can access characters using indexing and perform slicing, concatenation, and many operations.

Creation of string

s='python'

s

o/p:

python

Adding elements to string

s=s+' class'

s

o/p:

'python class'

Converting string into list

l=list(s)

l

o/p:

['p', 'y', 't', 'h', 'o', 'n', ' ', 'c', 'l', 'a', 's', 's']

Using list removing the element

l.remove(' ')

l

o/p:

['p', 'y', 't', 'h', 'o', 'n', 'c', 'l', 'a', 's', 's']

Converting list into string

```
s=''.join(l)
s
```

o/p:

'pythonclass'

Create separate list for upper case char and lower case char

```
s1='BeSaNt TeCh'
upper = []
lower = []
for i in s1:
    if i!=' ':
        if i.islower():
            lower.append(i)
        else:
            upper.append(i)
print("Uppercase letters:", upper)
print("Lowercase letters:", lower)
```

o/p:

Uppercase letters: ['B', 'S', 'N', 'T', 'C']

Lowercase letters: ['e', 'a', 't', 'e', 'h']

Write a program to count vowel,consnants,digits,special char

```
vow = 0
cons = 0
dig = 0
spe = 0
for i in s2:
    if i.isalpha():
        if i.lower() in 'aeiou':
            vow += 1
        else:
            cons += 1
    elif i.isdigit():
        dig += 1
    else:
        spe += 1
print("Vowels:", vow)
print("Consonants:", cons)
print("Digits:", dig)
print("Special characters:", spe)
```

o/p:

```
Vowels: 5
Consonants: 9
Digits: 5
Special characters: 3
```

Create a string made of the first, middle and last character Write a program to create a new string made of an input string's first, middle, and last character.

```
s='thanu'

f=s[0]

l=s[-1]

p=len(s)//2

m=s[p]

print(f+m+l)
```

o/p:

tau