

Python Tuples: Creation & Usage Methods Guide Author: Madhu Dadi Tags: python Source: <https://madhudadi.in/>

- Empty tuples are created using parentheses with no elements, demonstrating the basic syntax for tuple initialization

Explanation- The first line `print(t3[0:2])` retrieves and prints the first two elements of the tuple `t3`. - The second line pr

- The list t3 is then modified by setting the element at index 3 to the value 100. - This operation directly alters the o

- After deletion, the code attempts to print t3 again, which will raise a NameError since t3 no longer exists. - This sn

Output[code block]Checking membership of elements in Python collections using 'in' and 'not in' operatorsExplanat

Explanation- The code initializes a tuple t containing four integers: 1, 2, 3, and 4. - len(t) calculates and prints the n

- The method returns the index of the first occurrence of the specified value, which is 1 in this case. - The result is p

Explanation- The code imports the sys module to access system-specific parameters and functions.- It creates a lis

Explanation- The code initializes a tuple with three elements: 1, 2, and 3. - It unpacks the tuple into three variables.

- This approach eliminates the need for a temporary variable typically required in other programming languages for

- This demonstrates how to efficiently combine multiple iterables in Python.`block`Output`block`SetsA se

Output[`code block`]Attempting to include mutable items in a Python set results in a `TypeError`.Explanation- The code

Attempting to access an element in a Python set using an index results in an error.Explanation- Sets in Python are

Demonstrating the addition and updating of elements in a Python set  
Explanation- A set s is initialized with the element

Explanation- A set s is initialized with the integers 1 through 5. - The discard method is called to remove the element

- A set `s` is initialized with five integer elements: 1, 2, 3, 4, and 5. - The `pop()` method is called on the set `s`, which re

[code block]Output[code block]Set FunctionsThis code snippet demonstrates basic set operations in Python using

[code block]Output[code block]This code demonstrates how to find the intersection of two sets in Python and update

Demonstrating the use of symmetric difference and updating sets in PythonExplanation- The code initializes two se

Understanding set subset relationships in Python with the `issubset` method Explanation- The code creates two sets

method.Explanation- A set s1 is initialized with five integer elements: 1, 2, 3, 4, and 5. - The copy() method is called

Explanation- The code defines two frozensets, fs1 and fs2, containing unique integer elements. - The operator is u

[code block]Creating a frozenset containing integers and another frozenset in PythonExplanation- The code initializ

Dictionary Dictionary in Python is a collection of keys values, used to store data values like amap, which, unlike oth

- In the first instance, d4 is initialized with integer keys and values, resulting in {1: 1, 2: 2, 3: 3}. - In the second instance

- The second dictionary d6 attempts to use a tuple as both a key and a value, illustrating that while tuples can serve

'male' and prints the updated dictionary. - It then adds a new key 'weight' with the value 51 to the same dictionary c

- The code accesses a nested dictionary s which contains a key subjects. - It assigns the value 50 to the key ds with

the console. - The output will display each key-value pair on a new line, providing a clear view of the dictionary's contents.

- These methods are useful for iterating through the dictionary or for debugging purposes. [code block]Output [code block]

- Produces a compact one-line solution for mapping numbers to their squared values[code block]Output[code block]

[code block]Output[code block]Filtering a dictionary to retain only available products in stockExplanation- A dictiona

Output[code block]TupleQ1: Join Tuples if similar initial elementWhile working with Python tuples, we can have a p

Explanation- A tuple  $t$  is defined with five integer elements. - An empty list  $L$  is initialized to store the results of calc

Q4: Count no of tuples, list and set from a list[code block]Output:[code block]Count occurrences of different data ty

[code block]This Python code collects applicant details and filters candidates based on specific criteria.Explanation-

[code block]Output[code block]Q2: Write a program to count unique number of vowels using sets in a given string.

[code block]This code checks if a string contains exactly two unique characters.Explanation- The variable s is initia

duplicates. - Finally, the set `s` is printed, displaying all unique integers from the original list of lists. `[code block]`Output

an intersection operation. - Since sets do not allow duplicate values, the output will contain only unique common elements.

- A dictionary named testdict is defined, containing keys associated with lists of integers. - The code initializes maxv

Explanation- A string teststr is defined containing a sentence. - A dictionary repldict maps specific words to their re

- Initializes a list testlist containing mixed data types (strings and integers) and akeylist with two keys. - Calculates t

Explanation- Initializes a list of tuples L1 containing names and associated integer values.- Creates an empty dictio

of integers.- The code initializes an empty dictionary res to store the sorted results.- It iterates over the sorted keys