Python

Assignment Questions

Assignment

Q1. What are the characteristics of the tuples? Is tuple immutable? Tuples can be any type of data they are immutable

Q2. What are the two tuple methods in python? Give an example of each method. Give a reason why tuples have only two in-built methods as compared to Lists. Tuple has Count() and index() method:

T1 = (1,2,3,4,5,2,5,1)

T1.count(1)

T1.index(4)

Q3.  Which collection datatypes in python do not allow duplicate items? Write a code using a set to remove duplicates from the given list.

List = [1, 1, 1, 2, 1, 3, 1, 4, 2, 1, 2, 2, 2, 3, 2, 4, 3, 1, 3, 2, 3, 3, 3, 4, 4, 1, 4, 2, 4, 3, 4, 4]

Set does not have duplicate items.

List = set(List)

output: {1, 2, 3, 4}

other example:

s= {1,2,3,4,4,3,2,1}

output: {1, 2, 3, 4}

Q4. Explain the difference between the union() and update() methods for a set. Give an example of each method.

union() creates a new set on the other hand update() adds all missing items on the current set from another set.

s1 = {4,3,2,1}

s2 = {8,7,6,5}

s1.update(s2)

output os s1: {1, 2, 3, 4, 5, 6, 7, 8}

s3 = s1.union(s2)

output os s3: {1, 2, 3, 4, 5, 6, 7, 8}

Q5. What is a dictionary? Give an example. Also, state whether a dictionary is ordered or unordered.

Dictionary stores data in key and its value,

example:

d = { 'std1': 'Reem' , 'std2': 'Ram'}

Dictionary now is ordered.

Q6. Can we create a nested dictionary? If so, please give an example by creating a simple one-level nested dictionary. Yes we can,

Example:

d = { 'std1': {'Name':'Reem', 'Score': 'A+'} , 'std2': {'Name':'Ram', 'Score':'B'}}

Q7. Using setdefault() method, create key named topics in the given dictionary and also add the value of the key as this list ['Python', 'Machine Learning’, 'Deep Learning']

dict1 = {'language' : 'Python', 'course': 'Data Science Masters'}

values = ["Python","Machine Learning","Deep Learning"]

dict1.setdefault('topics',[values])

Q8. What are the three view objects in dictionaries? Use the three in-built methods in python to display these three view objects for the given dictionary.

dict1 = {'Sport': 'Cricket' , 'Teams': ['India', 'Australia', 'England', 'South Africa', 'Sri Lanka', 'New Zealand']}

1. Key: dict1.keys()  
   output: dict\_keys(['Sport', 'Teams'])
2. Values: dict1.values()

output: dict\_values(['Cricket', ['India', 'Australia', 'England', 'South Africa', 'Sri Lanka', 'New Zealand']])

1. Items: dict1.items()

output: dict\_items([('Sport', 'Cricket'), ('Teams', ['India', 'Australia', 'England', 'South Africa', 'Sri Lanka', 'New Zealand'])])

Note: Create your assignment in Jupyter notebook and upload it in GitHub & share that github repository link through your dashboard.

Data Science Masters