Sequences

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| **Course-** BCA/ B.Sc | **Type**- Core |
| **Course Code-** CBCA113/CBSC116 | **Course Name**- Computational Thinking  With Python |
| **Year-** 2023 | **Semester-** odd |
|  | **Batch-** ALL |

**Tutorial Assignment: 6**

**Tutorial title: Sequences**

**CO Mapping**

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| **Name** | **CO1** | **CO2** | **CO3** |
| **Conditional Statements: Sequences** |  | **-** | **-** |

**Sequence Data Types in Python**



Sequence Data Types are used to store data in containers in the Python. The different types of containers used to store the data are **List, Tuple, Set, Dictionary** and **String**.

A screenshot of a computer

Description automatically generated

**Sequence Operators**

*Concatenation :* +

*Repetition :* \*

*Membership Testing :* *x* in *S*

*Slicing a Sequence :* *S*[*i*:*j*], *S*[*i*:], *S*[:*j*]

***List Methods***

Graphical user interface, application, table

Description automatically generated

**EXERCISE**

1. Consider the following the definition of a nested list:

List1 = [100, [32, 200, [3, 'python', 2]], 'prog']

Write down the expression that returns ‘y’ in ‘python’.

1. Which of the following options is the correct syntax to assign a tuple of length 1 to a variable tup?
2. tup= [1]
3. tup= (1, )
4. tup=tuple (1)
5. tup =1
6. Consider the following dictionary and write the code to print the email id from the given dictionary.

student = {

"rollno": 201301,

"name": "Amit Roy",

"email": "amit.roy@gmail.com",

"cgpa": "9.2",

}

1. What is the output of the following code?

dict1 = dict()

for y in enumerate(range(4)):

    dict1[y[0]] = y[1]

    dict1[y[1]+7] = y[0]

print(dict1)

1. What is the error in the following code?

dict1 = {"Amit":100, "Ajay":40}

dict2 = {"Amit":400, "Ajay":40}

print(dict1>dict2)

1. What will be the output of the following code?

d1 = {'Cricket' : 101,

            'Football' : 102,

            'Basketbal' : 103

            }

d2 = {'Vollyball' : 101,

            'Tennis' : 102,

            'Cricket' : 103

            }

d1.update(d2);

for key, values in d1.items():

    print("key is",key,"and value is", values)

1. What will be the output of the following code?

tuple1 = (18,)

print(tuple1 \* 2)

1. (36,36)
2. (18, 18)
3. (36)
4. It will generate error
5. Consider the following code and find out its output.

tuple1 = (10, 20, 30, 40, 50)

print(tuple1[2:4], tuple1[:4], tuple1[3:])

1. (30, 40) (10, 20, 30, 40) (40, 50)
2. (30,40,50) (10, 20, 30, 40, 50) (40, 50)
3. (20, 30,40,50) (10, 20, 30, 40,) (30, 40, 50)
4. (40,50) (10, 20, 30, 40,) (50)
5. Consider the following code fragment.

colors = {"Blue", "Red", "Green"}

Choose the correct option that removes “Red” from the set

1. colors.discard("Red")
2. del colors ["Red"]
3. del “Red”
4. colors.pop("Red")
5. Find out the output of the following code:

Countries = {"USA", "UK", "Australia"}

Countries.update(["India", "Pakistan", "Srilanka"])

print(Countries)

1. . Predict the outcome of the following code if it is correct otherwise correct it

num1 = [23,45,67,78,89,34]

num2 = [34,89,55,56,39,67]

print(set(num1) & set(num2))

1. . Predict the outcome of the following code if it is correct otherwise correct it

a = [18, 18, 18, 6, 3, 4, 9, 9, 9]

length = len(a)

for i in range(length - 2):

if a[i] == a[i + 1] and a[i + 1] == a[i + 2]:

print(a[i])

13. Predict the outcome of the following code:

val = [(1, 3, 5), (4, 5, 7), (1, 2, 6), (10, 9), (10,)]

print("The ljst before : " ,val)

res = []

s = set()

for i in val:

for j in i:

if not j in s:

s.add(j)

res.append(j)

print("The list : " ,res)

1. Write a program for given two dictionaries merge it into one dictionary.
2. Write a Python program that counts the number of occurrence of each character in a given string using a dictionaries.