Data Types Assignment

1. Concatenate the string 'Ninty', 'Hours', 'Of', 'Data','Science' to a single string.

In [392]:
```
S = 'Ninty'+'Hours'+'of'+'data'+'Science'
print(S)
```

```
NintyHoursofdataScience
```

1. Concatenate the string 'Coding', 'For' , 'All' to a single string, 'Coding For All'.

In [393]:
```
string1 = 'Coding'
string2 = 'for'
string3 = 'All'

print(string1 + string2 + string3)
```

```
CodingforAll
```

1. Declare a variable named company and assign it to an initial value "Coding For All".

In [394]:
```
company = "Coding For All"
```

1. Print the variable company using print().

In [395]:
```
print(company)
```

```
Coding For All
```

1. Print the length of the company string using len() method and print().

In [396]:
```
print(len(company))
```

```
14
```

1. What is the character at index 0 in the string Coding For All.

In [397]:
```
"Coding For All"[0]
```

Out [397]: 'C'

1. What is the last index of the string Coding For All.

In [398]:
```
"Coding For All"[-1]
```

Out [398]: 'l'

1. What character is at index 10 in "Coding For All" string.

In [399]:
```
"Coding For All"[10]
```

Out [399]: ' '

1. Slice out the phrase 'because because because' in the following sentence: 'You cannot end a sentence with because because because is a conjunction'

In [400]:
```
'You cannot end a sentence with because because because is a conjunction'[3
```

Out [400]: 'because because because'

1. Declare an empty list

In [401]:
```
Empty_list = []
```

1. Declare a list with more than 5 items

In [402]:
```
Items = [1,2,3,4,5,6,7]
```

1. Find the length of your list

In [403]:
```
len(Items)
```

Out [403]: 7

1. Get the first item, the middle item and the last item of the list

In [404]:
```
print(Items[0])
print(Items[int(len(Items)/2)])
print(Items[-1])
```

```
1
4
7
```

1. Declare a list called mixed_data_types, put your(name, age, height, marital status, address)

In [405]:
```
mixed_data_types = ['Deepika Kantu','29','''5'6"''',"Unmarried","Visakhapat
```

1. Declare a list variable named it_companies and assign initial values Facebook, Google, Microsoft, Apple, IBM, Oracle and Amazon.

In [406]:
```
it_companies = ['Facebook','Google','Microsoft','Apple','IBM','Oracle','Ama
```

1. Print the list using print()

In [407]:
```
print(it_companies)
```

```
['Facebook', 'Google', 'Microsoft', 'Apple', 'IBM', 'Oracle', 'Amazon']
```

1. Print the number of companies in the list

In [408]:
```
print(len(it_companies))
```

```
7
```

1. Print the first, middle and last company

In [409]:
```
print(it_companies[0])
print(it_companies[len(it_companies)//2])
print(it_companies[-1])
```

```
Facebook
Apple
Amazon
```

1. Print the list after modifying one of the companies

In [410]:
```
it_companies[0] = 'MuSigma'
print(it_companies)
```

```
['MuSigma', 'Google', 'Microsoft', 'Apple', 'IBM', 'Oracle', 'Amazon']
```

1. Add an IT company to it_companies

In [411]:
```
it_companies.append("Facebook")
```

1. Insert an IT company in the middle of the companies list

In [412]:
```
it_companies.insert(len(it_companies)// 2,"Miracle")
```

In [413]:
```
print(it_companies)
```

```
['MuSigma', 'Google', 'Microsoft', 'Apple', 'Miracle', 'IBM', 'Oracle', 'Amazon', 'Facebook']
```

1. Slice out the first 3 companies from the list

In [414]:
```
it_companies[0:3]
```

Out [414]:
```
['MuSigma', 'Google', 'Microsoft']
```

1. Slice out the last 3 companies from the list

In [415]:
```
it_companies[-4:]
```

Out [415]:
```
['IBM', 'Oracle', 'Amazon', 'Facebook']
```

1. Slice out the middle IT company or companies from the list

In [416]:
```
print(it_companies)

if len(it_companies) % 2 !=  0:
    print(it_companies[len(it_companies)//2])
else:

    print(it_companies[len(it_companies)//2 -1],it_companies[len(it_compani
```

```
['MuSigma', 'Google', 'Microsoft', 'Apple', 'Miracle', 'IBM', 'Oracle', 'Amazon', 'Facebook']
Miracle
```

1. Remove the first IT company from the list

In [417]:
```
it_companies.pop(0)
```

Out [417]:
```
'MuSigma'
```

1. Remove the middle IT company or companies from the list

In [418]:
```
if len(it_companies) % 2 == 0:
    it_companies.pop(len(it_companies)//2)
else :
     it_companies.pop(len(it_companies)//2) and it_companies.pop(len(it_com
```

1. Remove the last IT company from the list

In [419]:
```
it_companies.pop(-1)
```

Out [419]:
```
'Facebook'
```

1. Remove all IT companies from the list

In [420]:
```
it_companies.clear()

it_companies
```

Out [420]:
```
[]
```

1. Destroy the IT companies list

In [421]:
```
#del it_companies
```

1. Create an empty tuple

In [422]:
```
empty_tuple = ()
```

1. Create a tuple name as siblings containing names of your sisters and your brothers

In [423]:
```
siblings = ("Rohan","Akash","Varun","Vaidehi","Vimal")
```

1. How many siblings do you have?

In [424]:
```
print(len(siblings))
```

```
5
```

1. Create tuple containing fruits, vegetables and animal products and assign it to a variable called food_stuff_tp.

In [425]:
```
food_stuff_tp = ("Apple","Banana","Custard Apple","Onion","Keera","Brinjal"
```

1. Change the about food_stuff_tp tuple to a food_stuff_lt list

In [426]:
```
food_stuff_lt = food_stuff_tp[:]
```

1. Slice out the middle item or items from the food_stuff_tp tuple or food_stuff_lt list.

In [427]:
```
food_stuff_lt[len(food_stuff_lt)//2]
```

Out [427]:
```
'Keera'
```

1. Slice out the first three items and the last three items from food_staff_lt tuple

In [428]:
```
print(food_stuff_lt[0:3], food_stuff_lt[-4:-1])
```

```
('Apple', 'Banana', 'Custard Apple') ('Brinjal', 'Chicken', 'Milk')
```

1. Delete the food_staff_tp tuple completely

In [429]:
```
del(food_stuff_tp)
```

1. Create an empty dictionary called dog

In [430]:
```
dog = {}
```

1. Add name, color, breed, legs, age to the dog dictionary

In [431]:
```
dog['name'] = "Rocky"
dog['Breed'] = "GoldenRetreiver"
dog['legs'] = 4
dog['age'] = 3
```

1. Create a student dictionary and add first_name, last_name, gender, age, marital status, skills, country, city and address as keys for the dictionary

In [432]:
```
student = {
    'first_name': 'John',
    'last_name': 'Doe',
    'gender': 'Male',
    'age': 25,
    'marital status': 'Single',
    'skills': ['Python', 'Java'],
    'country': 'USA',
    'city': 'New York',
    'address': '123 Main St'
}
```

1. Get the length of the student dictionary

In [433]:
```
len(student)
```

Out [433]: 9

1. Get the value of skills and check the data type, it should be a list

In [434]:
```
skills = student['skills']
print(skills)
type(skills)
```

```
['Python', 'Java']
```

Out [434]: list

1. Modify the skills values by adding one or two skills

In [435]:
```
student['skills'].append("C++")
```

1. Get the dictionary keys as a list

In [436]:
```
student.keys()
```

Out [436]:
```
dict_keys(['first_name', 'last_name', 'gender', 'age', 'marital status', 'skills', 'country',
'city', 'address'])
```

1. Get the dictionary values as a list

In [437]:
```
student.values()
```

Out [437]:
```
dict_values(['John', 'Doe', 'Male', 25, 'Single', ['Python', 'Java', 'C++'], 'USA', 'New
York', '123 Main St'])
```

1. Delete one of the items in the dictionary

In [438]:
```
del(student['age'])

student.keys()
```

Out [438]:
```
dict_keys(['first_name', 'last_name', 'gender', 'marital status', 'skills', 'country',
'city', 'address'])
```

1. Delete one of the dictionaries

In [439]:
```
del(dog)
```

1. Find the length of the set it_companies

In [440]:
```
# initially it_compsnies designated as a list and also as per the instructi
print(len(it_companies))
```

```
0
```

1. Add 'Twitter' to it_companies

In [441]:
```
it_companies.append('Twitter')

it_companies = set(it_companies)
```

1. Insert multiple IT companies at once to the set it_companies

In [442]:
```
it_companies.update({'google','meta'})
```

1. Remove one of the companies from the set it_companies

In [443]:
```
it_companies.pop()

it_companies
```

Out [443]:
```
{'google', 'meta'}
```