Name : Sandeep Dontiwar

Roll No. : 09

Assignment no. : 04

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print('10', type(10))

print('10/5',type(10/5))

print ('5/10', type(5/10))

print ('5%10', type(5 % 10))

print ('10%5', type(10%5))

print ('this is string', type('this is string'))

print ("this is also string",type("this is also string "))

print ('True', type('True'))

#print (type(true)) ==> Error true not defined

print (type(True))

x=True

print ('x', type(x))

ad=10

bd=20

print (ad+bd)

print(type(ad+bd))

print ('ad'+'bd')

print (type('ad'+'bd'))

fname='Sushant'

lname='Gote'

print (fname+" "+lname, type(fname+lname))

#following prin will give error because Age at the end is integer and can not be added with string

#print ("First name is" + fname + "and last name is" + lname + "and Age is " + int(input("Enter the age")))

#but above error can be removed by converting age into string as follows

print ("First name is "+ fname +" and last name is "+lname + "and age is "+ str(input("Enter the age")))

a=20

print ("the value of a is "+ str(a))

##############

names = ['United States', 'Australia', 'Japan', 'India', 'Russia', 'Morocco', 'Egypt']

dr = [True, False, False, False, True, True, True]

cpc = [809, 731, 588, 18, 200, 70, 45]

# create data dictioanry

dict={'country':names, 'drives\_right':dr, 'cars\_per\_cap': cpc}

print(dict)

#creating data frames from data dictionary

import pandas as pd

dataframe=pd.DataFrame(dict)

print(dataframe)

#=======================

#Assigning unique labels to rows

# Pre-defined lists

names = ['United States', 'Australia', 'Japan', 'India', 'Russia', 'Morocco', 'Egypt']

dr = [True, False, False, False, True, True, True]

cpc = [809, 731, 588, 18, 200, 70, 45]

# Import pandas as pd

import pandas as pd

# Create dictionary my\_dict with three key:value pairs: my\_dict

my\_dict={'country':names, 'drives\_right':dr, 'cars\_per\_cap':cpc}

print(my\_dict)

# Build a DataFrame cars from my\_dict: cars

cars=pd.DataFrame(my\_dict)

# Print cars

print(cars)

#creating a list of students record

# each record contains [Name of students, Date of Birth, Roll No, Class, Percentage]

import time

from datetime import date

print(date.today())

students=[['sushant gote', date(1980,8,20), 1, 'I', 89 ],

['vishnu mundhe', date(1980,11,3),2,'II', 90 ],

['Manisha',date(1980,3,1),3,'II',76],

['Mohan Patil', date(1970,7,1),4,'III',98],

['Mukund', date(1972,7,1), 5, 'III',76],

['shrikant gote', date(1987,9,29), 6, 'I', 90 ],

['Nitin', date(1987,1,3),7,'II', 94 ],

['Aditi',date(1988,12,21),8,'II',98],

['Soham', date(2014,3,6),9,'III',96],

['Kishor', date(1980,4,13), 10, 'III',78]]

print(students)

print(type(students))

#index starts with 0

# some elements can be selected by specifying range as [low: end]

#resultant list contains (low+1)th to (end-1)th element because lowest index in list considered by python is 0

stud1=students[:4]

print(stud1)

stud2=students[4:]

print(stud2)

stud3=students[2:5]

print(stud3)

#Slicing

# Create the areas list

areas = ["hallway", 11.25, "kitchen", 18.0, "living room", 20.0, "bedroom", 10.75, "bathroom", 9.50]

# Use slicing to create downstairs

#to contain forst 6 elements

downstairs=areas[0:6]

# Use slicing to create upstairs to contain last 4 elements

upstairs=areas[6:10]

# Print out downstairs and upstairs

print(downstairs)

print(upstairs)

l=[0,1,2,3,4,5,6,7]

print(l[0:4])

#dicing using only one or no index

# to print all elements of students

print(students[:])

# to print first 6 elements of students list

#in dicing last index is considered

print("printing first 6 elemtnts")

#a=int(input())

print(students[:6])

# to print last 4 elemenys of students list

print("printing last 4 elements of list")

#in dicing first index is skipped

print(students[6:])

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**OUTPUT :**

10 <class 'int'>

10/5 <class 'float'>

5/10 <class 'float'>

5%10 <class 'int'>

10%5 <class 'int'>

this is string <class 'str'>

this is also string <class 'str'>

True <class 'str'>

<class 'bool'>

x <class 'bool'>

30

<class 'int'>

adbd

<class 'str'>

Sushant Gote <class 'str'>

Enter the age 20

First name is Sushant and last name is Goteand age is 20

the value of a is 20

{'country': ['United States', 'Australia', 'Japan', 'India', 'Russia', 'Morocco', 'Egypt'], 'drives\_right': [True, False, False, False, True, True, True], 'cars\_per\_cap': [809, 731, 588, 18, 200, 70, 45]}

cars\_per\_cap country drives\_right

0 809 United States True

1 731 Australia False

2 588 Japan False

3 18 India False

4 200 Russia True

5 70 Morocco True

6 45 Egypt True

{'country': ['United States', 'Australia', 'Japan', 'India', 'Russia', 'Morocco', 'Egypt'], 'drives\_right': [True, False, False, False, True, True, True], 'cars\_per\_cap': [809, 731, 588, 18, 200, 70, 45]}

cars\_per\_cap country drives\_right

0 809 United States True

1 731 Australia False

2 588 Japan False

3 18 India False

4 200 Russia True

5 70 Morocco True

6 45 Egypt True

2018-04-16

[['sushant gote', datetime.date(1980, 8, 20), 1, 'I', 89], ['vishnu mundhe', datetime.date(1980, 11, 3), 2, 'II', 90], ['Manisha', datetime.date(1980, 3, 1), 3, 'II', 76], ['Mohan Patil', datetime.date(1970, 7, 1), 4, 'III', 98], ['Mukund', datetime.date(1972, 7, 1), 5, 'III', 76], ['shrikant gote', datetime.date(1987, 9, 29), 6, 'I', 90], ['Nitin', datetime.date(1987, 1, 3), 7, 'II', 94], ['Aditi', datetime.date(1988, 12, 21), 8, 'II', 98], ['Soham', datetime.date(2014, 3, 6), 9, 'III', 96], ['Kishor', datetime.date(1980, 4, 13), 10, 'III', 78]]

<class 'list'>

[['sushant gote', datetime.date(1980, 8, 20), 1, 'I', 89], ['vishnu mundhe', datetime.date(1980, 11, 3), 2, 'II', 90], ['Manisha', datetime.date(1980, 3, 1), 3, 'II', 76], ['Mohan Patil', datetime.date(1970, 7, 1), 4, 'III', 98]]

[['Mukund', datetime.date(1972, 7, 1), 5, 'III', 76], ['shrikant gote', datetime.date(1987, 9, 29), 6, 'I', 90], ['Nitin', datetime.date(1987, 1, 3), 7, 'II', 94], ['Aditi', datetime.date(1988, 12, 21), 8, 'II', 98], ['Soham', datetime.date(2014, 3, 6), 9, 'III', 96], ['Kishor', datetime.date(1980, 4, 13), 10, 'III', 78]]

[['Manisha', datetime.date(1980, 3, 1), 3, 'II', 76], ['Mohan Patil', datetime.date(1970, 7, 1), 4, 'III', 98], ['Mukund', datetime.date(1972, 7, 1), 5, 'III', 76]]

['hallway', 11.25, 'kitchen', 18.0, 'living room', 20.0]

['bedroom', 10.75, 'bathroom', 9.5]

[0, 1, 2, 3]

[['sushant gote', datetime.date(1980, 8, 20), 1, 'I', 89], ['vishnu mundhe', datetime.date(1980, 11, 3), 2, 'II', 90], ['Manisha', datetime.date(1980, 3, 1), 3, 'II', 76], ['Mohan Patil', datetime.date(1970, 7, 1), 4, 'III', 98], ['Mukund', datetime.date(1972, 7, 1), 5, 'III', 76], ['shrikant gote', datetime.date(1987, 9, 29), 6, 'I', 90], ['Nitin', datetime.date(1987, 1, 3), 7, 'II', 94], ['Aditi', datetime.date(1988, 12, 21), 8, 'II', 98], ['Soham', datetime.date(2014, 3, 6), 9, 'III', 96], ['Kishor', datetime.date(1980, 4, 13), 10, 'III', 78]]

printing first 6 elemtnts

[['sushant gote', datetime.date(1980, 8, 20), 1, 'I', 89], ['vishnu mundhe', datetime.date(1980, 11, 3), 2, 'II', 90], ['Manisha', datetime.date(1980, 3, 1), 3, 'II', 76], ['Mohan Patil', datetime.date(1970, 7, 1), 4, 'III', 98], ['Mukund', datetime.date(1972, 7, 1), 5, 'III', 76], ['shrikant gote', datetime.date(1987, 9, 29), 6, 'I', 90]]

printing last 4 elements of list

[['Nitin', datetime.date(1987, 1, 3), 7, 'II', 94], ['Aditi', datetime.date(1988, 12, 21), 8, 'II', 98], ['Soham', datetime.date(2014, 3, 6), 9, 'III', 96], ['Kishor', datetime.date(1980, 4, 13), 10, 'III', 78]]