G. H. Raisoni College Of Engineering And Management, Wagholi Pune				
<u>2021- 2022</u>				
Group B :-Assignment no :-6				
Department	CE [SUMMER 2022 (Online)]			
Term / Section	III/B	Date Of submission		11-12-2021
Subject Name /Code	Python for Data Science / UCSP204			
Roll No.	SCOB77	Name	<u>Pratham Rajkumar pitty</u>	
Registration Number	2020AC0E1100107			

(13)

Aim: > Write a Python program to create a Datuframe of 6 rows from Dictionary First create a.

Tourism - Visitors dictionary From Four lists of "cities" "Visitors" "Signups" and "weekdays" convert the dictionary to Dataframe importing pendas library and (reate row labels as the short forms of the country names and display the data from

Theory:

Pondas Dota Fragre:

Pundas Datafram is a 2-D Size-mutable, potentially hetrogeneous tabular data Structure with lubeled axes (rows and columns). A Dataframe is a 2-D data Structure i.e. data is a aligned in a tabular fushion in rows and column pandas Dataframe consists of 3 principal compenents, the data rows of column

The basic operations which can be performed on pundas dataframe:

· Creating a Data Frame - was king with missing data.

Dealing with Rows & columns · iterating over rows of column.

· indexing and Selecting Data frame

(1) (seating a pundos pataframe In the real world pandas Dataframe is created by loading the dataset from existing Storage, storage can be SQL Dutabase, CSV File & Excel File pondas Dutaframe can be created in different ways From lists, compedictionary. and From a list of dictionary, etc.

Example.

import pandos as Pd.

List=[Apple 'orange' Mango Bunana

df = pd. Dataf xame (List)

point (dF)

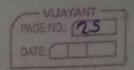
Creating data from e from dict of ndarray 11:45:
To creat Data Frame From dict of narray lists, all the narray must be some length I findex is passed then the length index Should be equal to the length of arrays. If no index is passed, then by defult index will be range (n) where n'is the array length.

impost pandas as pd data = { ` Nume': ['Appk', 'Tom', ` nick', ` Koish'] `Age': [20,21,19,18]} dF = Pd. Pata Foume (data) Point (dF)

(2) Dealing with rows of column

A Data From is a 2-D data Structure i.e. data is aligned in a tabular Fashion in rows and column Basic operation like adding deleting selecting frenuming) can be performed on it.

pondas patarrame, we can access the columns by calling them by their columns name.



import pandas as pd # import Pondas Package data = ? Name': ['Jai' 'poince' 'RaJ'] Address: ['Delhi', Kumpor', pune] ' qualification: [MSC; MA', 'MCA']} df= pd. Data Foume (data) # convert dictionary to Duta for print(df[['Nume' Age']]) # select 2 columns potput nume Age 0 Jay 10 27 1 m 10/1. Pring RaT Row Selection >> pandas provide a unique methodto octoire vous from a Data Frame Data frame 1001.7 method is used to retrive rows from pandas Dataframe. Rows can also be selected by passing integer location to an ijocal Function

impost pandas as pd.

data = pd. xead_(SV ("nba.csv", index_col="Name")

making data frame, from CSV File

retrieving row by loc method

First = data.loc["Avery Bradley"]

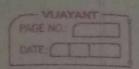
Second = data.loc["R.J. Hunter"]

rosint (Fix 4: "In", Cecond)

Note: + # Link For Nba. (SV -> https:// media.geeksforgeeks.org/wp-

(3) Indexing and selecting Data:

indexing in pandas means



simply selecting posticular yours and columns of days from a Data Frame. Indexing could mean selecting all the yours and some of the columns some of the bows and all of the columns, or some of each of the rows of It is also knows as Subsetselection. Indexing a natofoom using indexing operations: 7:3 Indexing operator is used to refer to the Square brackets following an object. The .loc | iloc indexess also use the indexing operator to make selection. In this indexing operator to refer to df[Selectina a single Column # In order to select single column simply put the name # of column in between impost pandes as pd data = Pd. zead-csv ("nba, rsv", index col="Name") IFIXS+ = dota["Age"] both = Betriving column. uprint (Fixst) First = data loc [Avery Bradle "] Second = data loc [R. J. Hunter "] point (First, " is In Int second)

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point [row2] # Single 8

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In [7]:
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```
print("*********SCOB77_Pratham pitty_Group B_Assignment_6*********")
                 -----")
import pandas as pd
Tourism_visitors = {"cities":['Amravati', 'Jalgaon', 'Pune', 'Paratwada','Nagpur','Dombival
"signups":['1/10/2020','2/10/2020','3/10/2020','4/10/2020','5/10/2020','6/10/2020'],"Weekda
print(Tourism_visitors.keys())
Brics = pd.DataFrame(Tourism_visitors)
print(Brics)
print("-----\n")
row_labels = ['1', '2', '3', '4', '5', '6']
df = pd.DataFrame(Tourism_visitors, index = row_labels)
print(df)
4
*************SCOB77_Pratham pitty_Group B_Assignment_6*********
dict_keys(['cities', 'Visitors', 'signups', 'Weekdays'])
     cities Visitors signups
                              Weekdays
0
   Amravati Pratham 1/10/2020
                               Monday
1
    Jalgaon
              Rajas 2/10/2020
                               Tuesday
2
      Pune
              Sahil 3/10/2020 Wednesday
             Shyam 4/10/2020
3
 Paratwada
                              Thursday
4
     Nagpur Sourabh 5/10/2020
                               Friday
 Dombivali Anmol 6/10/2020
                               Saturday
     cities Visitors
                     signups
                               Weekdays
1
   Amravati Pratham 1/10/2020
                               Monday
2
              Rajas 2/10/2020
    Jalgaon
                                Tuesday
3
              Sahil 3/10/2020 Wednesday
      Pune
4
 Paratwada
              Shyam 4/10/2020 Thursday
5
     Nagpur Sourabh 5/10/2020
                                 Friday
  Dombivali
              Anmol 6/10/2020
                               Saturday
In [ ]:
```