G. H. Raisoni College Of Engineering And Management, Wagholi Pune

2021- 2022

Group B :-Assignment no :-5

Department	CE [SUMMER 2022 (Online)]		
Term / Section	III/B	Date Of **submission**	13-12-2021
Subject Name /Code	Python for Data Science / UCSP204		
Roll No.	SCOB77	Name	Pratham Rajkumar pitty
Registration Number	2020AC0E1100107		

Group B :- Assignment No:- 5 (12)

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Aim:- write a python program to read csv/excel sample file using pandas library and write into JSON file formation.

Theory :-

pandas library:-

pandas is an open-source, BSD-licensed python library providing high performance, easy-to-use data structures and data analysis tools for the python programming language.

python with pandas uses wide range of fields including academic and commercial domains including finance, economics, statistics, analytics, etc.

CSV File:-

(comma-separated value) Files are a common File Format for transferring and storing data. The ability to read, main manipulate, and write data to and from CSV files using Python is a key skill to master for any data scientist or business analysis.

The basic process of loading data from a CSV file into a pandas DataFrame is achieved using the "read_csv" function in pandas:

```
import pandas as pd
# Read data from file 'filename.csv'
data = pd.read_csv("Filename.csv")
data.head()
```

JSON:

The Full Form of JSON is JavaScript Object Notation. It means that a script (executable) file which is made of text in a programming language, is used to store and transfer the data. Python supports JSON through a built-in package called JSON. To use this Feature we import the JSON package in python script.

The text in JSON is done through quoted-String which contains the value in key-value mapping within { }. It is similar to the dictionary in Python. JSON shows an API similar to user of standard Library marshal and pickle modules and Python natively supports JSON Features.

EX

```
import json
# {key : value mapping}
a = {"name":"John", "age":31, "salary":25000}
# Conversion to JSON done by dumps() Function
b = json.dumps(a)

# printing the output
print(b)
```

json.load methods to read a file containing JSON object.

In [6]:
```
print("****************************************")
print("SCOB77_Pratham pitty_Group B Assignment 5 (12)")
print("****************************************")
# Using Panads library read CSV/excel sample file  and  write into JSON file formation"""
import pandas as pd
import json
#Reading CSV file in Pandas : read_csv()
df=pd.read_csv('C:\\Users\prath\Videos\#2.second year\sem3\PDS\csv files\VideoGame_sales_data.csv')
print(df)
print('*******************************************************************************************')
print(df)
#Writing to json file
df.to_json (r'C:\\Users\prath\Videos\#2.second year\sem3\PDS\csv files\VideoGame_sales_data.csv')
print('*******************************************************************************************')
with open('C:\\Users\prath\Videos\#2.second year\sem3\PDS\csv files\VideoGame_sales_data.csv') as f:
    df=json.load(f)
print(df)
```

```
****************************************
SCOB77_Pratham pitty_Group B Assignment 1
****************************************
Empty DataFrame
Columns: [{"{\"{\\\"Rank\\\":{\\\"0\\\":1\":{}":{}, 1:2:{}:{}, 2:3:{}:{}, 3:4:{}:{}, 4:5:{}:{}, 5:6:{}:{}, 6:7:{}:{}, 7:8:
{}:{}, 8:9:{}:{}, 9:10:{}:{}, 10:11:{}:{}, 11:12:{}:{}, 12:13:{}:{}, 13:14:{}:{}, 14:15:{}:{}, 15:16:{}:{}, 16:17:{}:{}, 1
7:18:{}:{}, 18:19:{}:{}, 19:20:{}:{}, 20:21:{}:{}, 21:22:{}:{}, 22:23:{}:{}, 23:24:{}:{}, 24:25:{}:{}, 25:26:{}:{}, 26:27:
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Index: []

[0 rows x 1089 columns]
********************************************************************************
Empty DataFrame
Columns: [{"{\"{\\\"Rank\\\":{\\\"0\\\":1\":{}":{}, 1:2:{}:{}, 2:3:{}:{}, 3:4:{}:{}, 4:5:{}:{}, 5:6:{}:{}, 6:7:{}:{}, 7:8:
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s\\\"\":{}":{}, ...]
Index: []

[0 rows x 1089 columns]
********************************************************************************
{'{"{\\"{\\\\\\"Rank\\\\\\":{\\\\\\"0\\\\\\":1\\":{}":{}': {}, '1:2:{}:{}': {}, '2:3:{}:{}': {}, '3:4:{}:{}': {}, '4:5:{}:
{}': {}, '5:6:{}:{}': {}, '6:7:{}:{}': {}, '7:8:{}:{}': {}, '8:9:{}:{}': {}, '9:10:{}:{}': {}, '10:11:{}:{}': {}, '11:12:
{}:{}': {}, '12:13:{}:{}': {}, '13:14:{}:{}': {}, '14:15:{}:{}': {}, '15:16:{}:{}': {}, '16:17:{}:{}': {}, '17:18:{}:{}':
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25:{}:{}': {}, '25:26:{}:{}': {}, '26:27:{}:{}': {}, '27:28:{}:{}': {}, '28:29:{}:{}': {}, '29:30:{}:{}': {}, '30:31:{}:
{}': {}, '31:32:{}:{}': {}, '32:33:{}:{}': {}, '33:34:{}:{}': {}, '34:35:{}:{}': {}, '35:36:{}:{}': {}, '36:37:{}:{}': {},
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{}:{}': {}, '44:45:{}:{}': {}, '45:46:{}:{}': {}, '46:47:{}:{}': {}, '47:48:{}:{}': {}, '48:49:{}:{}': {}, '49:50:{}:{}':
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57:{}:{}': {}, '57:58:{}:{}': {}, '58:59:{}:{}': {}, '59:60:{}:{}': {}, '60:61:{}:{}': {}, '61:62:{}:{}': {}, '62:63:{}:
{}': {}, '63:64:{}:{}': {}, '64:65:{}:{}': {}, '65:66:{}:{}': {}, '66:67:{}:{}': {}, '67:68:{}:{}': {}, '68:69:{}:{}': {},
'69:70:{}:{}': {}, '70:71:{}:{}': {}, '71:72:{}:{}': {}, '72:73:{}:{}': {}, '73:74:{}:{}': {}, '74:75:{}:{}': {}, '75:76:
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'5:\\\\Tetris\\\\\\\\":{}":{}': {}, '6:\\\\New Super Mario Bros.\\\\\\\\":{}":{}': {}, '7:\\\\Wii Play\\\\\\\\":{}":{}':
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\\\\\\\\":{}":{}': {}, '11:\\\\Mario Kart DS\\\\\\\\":{}":{}': {}, '12:\\\\Pokemon Gold\\\\\\\\\\\\\\/Pokemon Silver
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entures!\\\\\\\\":{}":{}': {}, '16:\\\\Grand Theft Auto V\\\\\\\\":{}":{}': {}, '17:\\\\Grand Theft Auto: San Andreas
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y\\\\\\\\":{}":{}': {}, '20:\\\\Pokemon Diamond\\\\\\\\\\\\\\/Pokemon Pearl\\\\\\\\":{}":{}': {}, '21:\\\\Super Mario Land
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'24:\\\\Grand Theft Auto: Vice City\\\\\\\\":{}":{}': {}, '25:\\\\Pokemon Ruby\\\\\\\\\\\\\\\/Pokemon Sapphire\\\\\\\\":
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Minutes a Day\\\\\\\\":{}":{}': {}, '28:\\\\Gran Turismo 3: A-Spec\\\\\\\\":{}":{}': {}, '29:\\\\Call of Duty: Modern Warf
are 3\\\\\\\\":{}":{}': {}, '30:\\\\Pok\\\\\\\\u00c3\\\\\\\\u00a9mon Yellow: Special Pikachu Edition\\\\\\\\":{}":{}': {},
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3:\\\\Call of Duty: Black Ops 3\\\\\\\\":{}":{}': {}, '34:\\\\Call of Duty: Black Ops II\\\\\\\\":{}":{}': {}, '35:\\\\Cal
l of Duty: Black Ops II\\\\\\\\":{}":{}': {}, '36:\\\\Call of Duty: Modern Warfare 2\\\\\\\\":{}":{}': {}, '37:\\\\Call of
Duty: Modern Warfare 3\\\\\\\\":{}":{}': {}, '38:\\\\Grand Theft Auto III\\\\\\\\":{}":{}': {}, '39:\\\\Super Smash Bros.
Brawl\\\\\\\\":{}":{}': {}, '40:\\\\Call of Duty: Black Ops\\\\\\\\":{}":{}': {}, '41:\\\\Animal Crossing: Wild World
\\\\\\\\":{}":{}': {}, '42:\\\\Mario Kart 7\\\\\\\\":{}":{}': {}, '43:\\\\Halo 3\\\\\\\\":{}":{}': {}, '44:\\\\Grand Theft
```