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COMMA SEPARATED VALUE

CSV FILE

- **CSV** is a simple **file format** used to store tabular data, such as a spreadsheet or database.
- **Files** in the **CSV format** can be imported to and exported from programs that store data in tables, such as Microsoft Excel or OpenOffice Calc.
- **CSV** stands for "comma-separated values".
- A comma-separated values file is a delimited text file that uses a comma to separate values.
- Each line of the file is a data record. Each record consists of one or more fields, separated by commas. The use of the comma as a field separator is the source of the name for this file format

CSV file handling in Python

- To perform read and write operation with CSV file, we must import **CSV** module.
- open() function is used to open file, and return file object.

Reading from CSV file

- import csv module
- Use open() to open csv file, it will return file object.
- Pass this file object to reader object.
- Perform operation you want

Example : Reading from CSV File

```
1,Amit,6000
2,Suresh Kumar,8000
3,Gabbar,75000
```

myfile.csv

```
import csv
with open('myfile.csv') as csvfile:
        myreader = csv.reader(csvfile,delimiter=',')
        print("%10s"%"EMPNO","%20s"%"EMP NAME","%10s"%"SALARY")
        print("================================================")
        for row in myreader:
                print("%10s"%row[0],"%20s"%row[1],"%10s"%row[2])
```

```
     EMPNO                EMP NAME      SALARY
================================================
         1                    Amit        6000
         2           Suresh Kumar         8000
         3                  Gabbar       75000
```

OUTPUT

Example : Counting number of records

```
1,Amit,6000
2,Suresh Kumar,8000
3,Gabbar,75000
```

myfile.csv

```
import csv
with open('myfile.csv') as csvfile:
        myreader = csv.reader(csvfile,delimiter=',')
        count=0
        print("%10s"%"EMPNO","%20s"%"EMP NAME","%10s"%"SALARY")
        print("=================================================")
        for row in myreader:
                print("%10s"%row[0],"%20s"%row[1],"%10s"%row[2])
                count+=1
        print("=================================================")
        print("%30s"%"TOTAL RECORDS :",count)
        print("=================================================")
```

```
     EMPNO                 EMP NAME      SALARY
=================================================
         1                     Amit        6000
         2             Suresh Kumar        8000
         3                   Gabbar       75000
=================================================
                TOTAL RECORDS : 3
=================================================
```

OUTPUT

Example : Sum of Salary and counting employee getting more than 7000

1,Amit,6000
2,Suresh Kumar,8000
3,Gabbar,75000

myfile.csv

```
import csv
with open('myfile.csv') as csvfile:
        myreader = csv.reader(csvfile,delimiter=',')
        count=0
        sum=0
        print("%10s"%"EMPNO","%20s"%"EMP NAME","%10s"%"SALARY")
        print("================================================")
        for row in myreader:
                print("%10s"%row[0],"%20s"%row[1],"%10s"%row[2])
                sum+=int(row[2])
                if int(row[2])>70000:
                        count+=1
        print("================================================")
        print("%30s"%"SUM OF SALARY :",sum)
        print("%40s"%"#EMPLOYEE GETTING SALARY >70000 :",count)
        print("================================================")
```

Example : Sum of Salary and counting employee getting more than 7000

```
1,Amit,6000
2,Suresh Kumar,8000
3,Gabbar,75000
```

myfile.csv

```
import csv
with open('myfile.csv') as csvfile:
        myreader = csv.reader(csvfile,delimiter=',')
        count=0
        sum=0
        print("%10s"%"EMPNO","%20s"%"EMP NAME","%10s"%"SALARY")
        print("=================================================")
        for row in myreader:
                print("%10s"%row[0],"%20s"%row[1],"%10s"%row[2])
                sum+=int(row[2])
                if int(row[2])>70000:
                        count+=1
        print("=================================================")
        print("%30s"%"SUM OF SALARY :",sum)
        print("%40s"%"#EMPLOYEE GETTING SALARY >70000 :",count)
        print("=================================================")
```

```
     EMPNO                EMP NAME      SALARY
=================================================
         1                    Amit        6000
         2            Suresh Kumar        8000
         3                  Gabbar       75000
=================================================
               SUM OF SALARY : 89000
       #EMPLOYEE GETTING SALARY >70000 : 1
=================================================
```

OUTPUT

Writing date in CSV file

- import csv module
- Use open() to open CSV file by specifying mode "w" or "a", it will return file object.
- "w" will overwrite previous content
- "a" will add content to the end of previous content.
- Pass the file object to writer object with delimiter.
- Then use writerow() to send data in CSV file

Example : Writing data to CSV file

```
1,Amit,6000
2,Suresh Kumar,8000
3,Gabbar,75000
```

myfile.csv

```
import csv
with open('myfile.csv',mode='a') as csvfile:
        mywriter = csv.writer(csvfile,delimiter=',')
        ans='y'
        while ans.lower()=='y':
                eno=int(input("Enter Employee Number "))
                name=input("Enter Employee Name ")
                salary=int(input("Enter Employee Salary :"))
                mywriter.writerow([eno,name,salary])
                print("## Data Saved... ##")
                ans=input("Add More ?")
```

Example : Writing data to CSV file

```
import csv
with open('myfile.csv',mode='a') as csvfile:
        mywriter = csv.writer(csvfile,delimiter=',')
        ans='y'
        while ans.lower()=='y':
                eno=int(input("Enter Employee Number "))
                name=input("Enter Employee Name ")
                salary=int(input("Enter Employee Salary :"))
                mywriter.writerow([eno,name,salary])
                print("## Data Saved... ##")
                ans=input("Add More ?")
```

```
Enter Employee Number 4
Enter Employee Name AMAN
Enter Employee Salary :80000
## Data Saved... ##
Add More ?Y
Enter Employee Number 5
Enter Employee Name JACKY
Enter Employee Salary :60000
## Data Saved... ##
Add More ?N
```

OUTPUT

```
1,Amit,6000
2,Suresh Kumar,8000
3,Gabbar,75000
```

myfile.csv

BEFORE EXECUTION

```
1,Amit,6000
2,Suresh Kumar,8000
3,Gabbar,75000
4,AMAN,80000
5,JACKY,60000
```

myfile.csv

AFTER EXECUTION