

Comma Separated Value (CSV) Files:

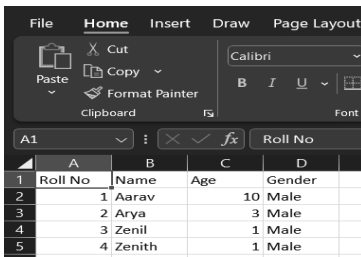
1. It is a plain text file which stores data in a tabular format, where each row represents a record and each column represents a field and fields are separated by commas in CSV files.
2. CSV module is used for working with CSV files:
`import csv`
3. The file extension for the CSV file will be .csv
4. CSV module provides two main classes for working with CSV files:
 - a. reader
 - b. writer
5. CSV reader object can be used to iterate through the rows of the CSV file.
6. CSV writer object that can be used to write row(s) to the CSV file.

- a. `writerow()`: This method is used to write a single row to the CSV file.
- b. `writerows()`: This method is used to write multiple rows to the CSV file.

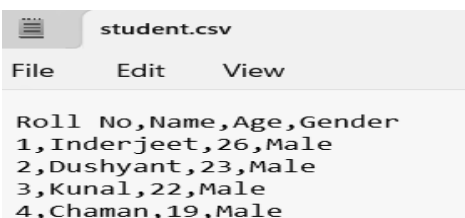
7. We can read CSV file data in an Excel file also.

- i. **Reader Function:** For reading data from a CSV file we require `csv.reader()` function.
- ii. **Writer Function:** For writing data to the CSV file we take a file object as input and write the data into the file.
 - a. `writerow()`: It writes a single row of data to the CSV file.
 - b. `writerows()`: It writes a list of rows of data to the CSV file.

WRITING INTO CSV FILES

Code: <pre>import csv f=open("student.csv","w",newline="") data=csv.writer(f) data.writerow(["Roll No","Name","Age","Gender"]) data.writerow([1,"Aarav",10,"Male"]) data.writerow([2,"Arya",3,"Male"]) data.writerow([3,"Zenil",1,"Male"]) data.writerow([4,"Zenith",1,"Male"]) print("Data Inserted Successfully") f.close()</pre>	Output in IDLE: <pre>>>> == RESTART: C:/Users/anujd/ Data Inserted Successfully</pre>
Result in Notepad: 	Result in Excel: 
Code: <pre>import csv f=open("student.csv","w",newline="") data=csv.writer(f) data.writerow(["Roll No","Name","Age","Gender"]) data.writerows([[1,"Inderjeet",26,"Male"], [2,"Dushyant",23,"Male"], [3,"Kunal",22,"Male"], [4,"Chaman",19,"Male"]]) print("Data Inserted Successfully") f.close()</pre>	Output in IDLE: 

Result in Notepad:

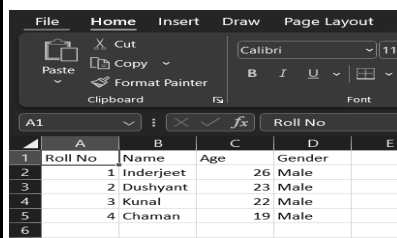


```
student.csv

File Edit View

Roll No,Name,Age,Gender
1,Inderjeet,26,Male
2,Dushyant,23,Male
3,Kunal,22,Male
4,Chaman,19,Male
```

Result in Excel:



	A	B	C	D	E
1	Roll No	Name	Age	Gender	
2	1	Inderjeet	26	Male	
3	2	Dushyant	23	Male	
4	3	Kunal	22	Male	
5	4	Chaman	19	Male	
6					

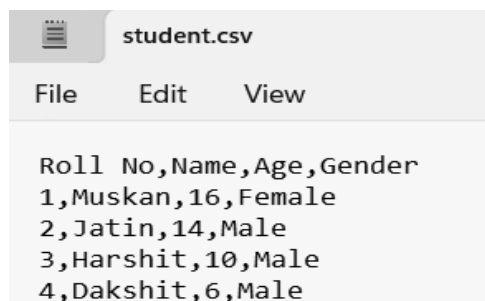
Code:

```
import csv
f=open("student.csv","w",newline="")
data=csv.writer(f)
data.writerow(["Roll No","Name","Age","Gender"])
ch="y"
details=[]
while ch in "yY":
    rno=int(input("Enter the Roll NO: "))
    name=input("Enter the Name : ")
    age=int(input("Enter the Age : "))
    gender=input("Enter the Gender : ")
    info=[rno,name,age,gender]
    details.append(info)
    ch=input("Press 'Y' if you want to continue: ")
data.writerows(details)
print("Data Inserted Successfully")
f.close()
```

Output in IDLE:

```
== RESTART: C:/Users/anujd/AppData/Local/Pro
Enter the Roll NO: 1
Enter the Name : Muskan
Enter the Age : 16
Enter the Gender : Female
Press 'Y' if you want to continue: y
Enter the Roll NO: 2
Enter the Name : Jatin
Enter the Age : 14
Enter the Gender : Male
Press 'Y' if you want to continue: y
Enter the Roll NO: 3
Enter the Name : Harshit
Enter the Age : 10
Enter the Gender : Male
Press 'Y' if you want to continue: y
Enter the Roll NO: 4
Enter the Name : Dakshit
Enter the Age : 6
Enter the Gender : Male
Press 'Y' if you want to continue: n
Data Inserted Successfully
```

Result in Notepad:

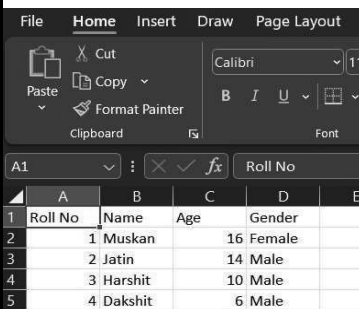


```
student.csv

File Edit View

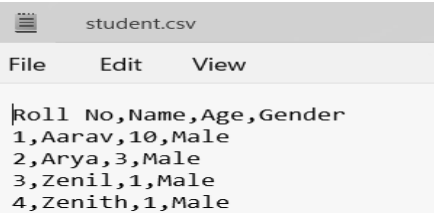
Roll No,Name,Age,Gender
1,Muskan,16,Female
2,Jatin,14,Male
3,Harshit,10,Male
4,Dakshit,6,Male
```

Result in Excel:



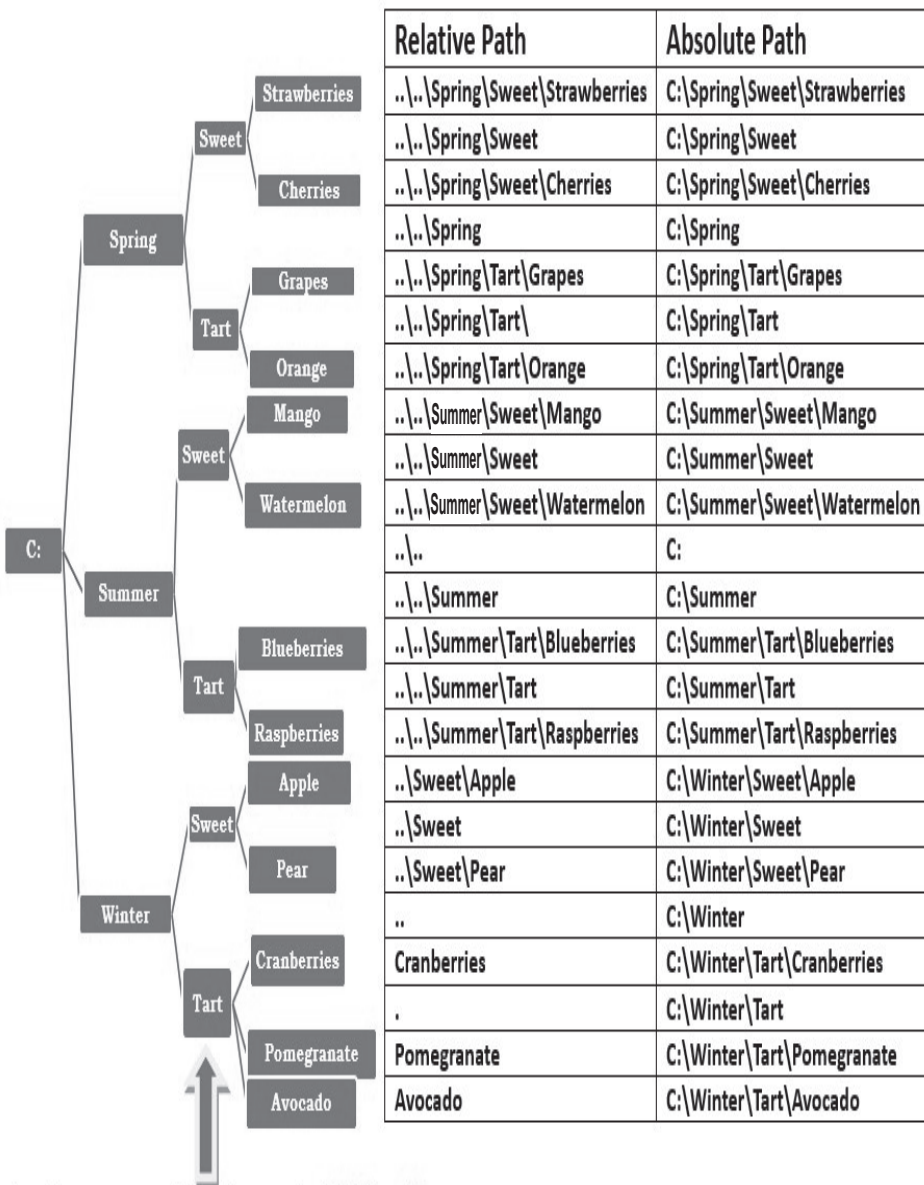
	A	B	C	D	E
1	Roll No	Name	Age	Gender	
2	1	Muskan	16	Female	
3	2	Jatin	14	Male	
4	3	Harshit	10	Male	
5	4	Dakshit	6	Male	

READING FROM CSV FILES

File Content:  <pre>student.csv File Edit View Roll No,Name,Age,Gender 1,Aarav,10,Male 2,Arya,3,Male 3,Zenil,1,Male 4,Zenith,1,Male</pre>	
Code: To read all records of csv file <pre>import csv f=open("student.csv","r") data=csv.reader(f) for i in data: print(i)</pre>	Output: <pre>== RESTART: C:/Users/anujd/AppData/L ['Roll No', 'Name', 'Age', 'Gender'] ['1', 'Aarav', '10', 'Male'] ['2', 'Arya', '3', 'Male'] ['3', 'Zenil', '1', 'Male'] ['4', 'Zenith', '1', 'Male'] >>></pre>
Code: To display all the records in whichname starts with 'A' <pre>import csv f=open("student.csv","r") data=csv.reader(f) for i in data: if i[1][0] in "aA": print(i)</pre>	Output: <pre>== RESTART: C:/Users/anujd/A ['1', 'Aarav', '10', 'Male'] ['2', 'Arya', '3', 'Male'] >>></pre>

ABSOLUTE AND RELATIVE PATH:

1. An absolute path is a path that starts from the root directory of the file system or we can say that it describes how to access a given file or directory, from the starting of the file system.
2. A relative path is a path that is relative to the current working directory or we can say that is interpreted from the perspective of the current working directory.



In this current working directory is: C:\Winter\Tart