Topic 67 - CSV Files

**What**

* **CSV** stands for **Comma-Separated Values**. It is a simple text-based format that is commonly used for storing tabular data, like a spreadsheet or database.
* **CSV files** store data in rows and columns, with each row representing a data entry and each column separated by commas.

**Example of CSV format:**

sql

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Year,Event,Winner

1995,Best-Kept Lawn,None

1999,Gobstones,Welch National

2006,World Cup,Burkina Faso

* The data in the CSV file is plain text, with no special formatting like in a spreadsheet.

**Why**

* CSV files are widely used because they are easy to read and write in many applications.
* They are especially useful for exchanging data between different programs, including spreadsheet and database software.

**How**

1. **Import the CSV Module**  
   Python has a built-in csv module to handle CSV files. You must import it to read and write CSV files:

python

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import csv

1. **Reading CSV Files**  
   To read a CSV file in Python, use the csv.reader() function, which reads each row and returns it as a list:

python

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with open("competitions.csv") as f:

contents\_of\_file = csv.reader(f)

1. **Accessing Data in the CSV**  
   After opening and reading the file, the csv.reader() returns an iterable of rows, where each row is a list of values. For example:

python

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with open("competitions.csv") as f:

contents\_of\_file = csv.reader(f)

for row in contents\_of\_file:

print(row)

**Output:**

css

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['Year', 'Event', 'Winner']

['1995', 'Best-Kept Lawn', 'None']

['1999', 'Gobstones', 'Welch National']

['2006', 'World Cup', 'Burkina Faso']

1. **File Handling**
   * **Opening Files**: Use the open() function to open the CSV file in reading mode.
   * **Iterating Over Rows**: The csv.reader() function allows you to loop over the rows and access the values in each column.

**Things to Remember**

* The csv.reader() function reads the entire CSV file and splits each row based on the commas separating the data.
* **CSV files** are text files, so they don't maintain any formatting like colors or fonts, only the data.