**1. What advantages do Excel spreadsheets have over CSV spreadsheets?**

* **Formatting**: Excel supports cell formatting (e.g., fonts, colors, borders).
* **Formulas**: Excel allows the use of formulas and functions.
* **Multiple Sheets**: Excel files can contain multiple sheets, while CSV files are limited to a single sheet.
* **Charts and Graphics**: Excel supports charts, images, and other graphical elements.
* **Data Validation**: Excel provides data validation features (e.g., dropdown lists, restrictions on input).
* **Macros**: Excel supports macros for automation.

**2. What do you pass to csv.reader() and csv.writer() to create reader and writer objects?**

* **csv.reader()**: Pass a file object opened in read mode.

import csv

with open('file.csv', 'r') as file:

reader = csv.reader(file)

* **csv.writer()**: Pass a file object opened in write mode.

with open('file.csv', 'w') as file:

writer = csv.writer(file)

**3. What modes do File objects for reader and writer objects need to be opened in?**

* **csv.reader()**: File object must be opened in **read mode** ('r').
* **csv.writer()**: File object must be opened in **write mode** ('w').

**4. What method takes a list argument and writes it to a CSV file?**

Use the writerow() method of a csv.writer object:

writer.writerow(['Column1', 'Column2', 'Column3'])

**5. What do the keyword arguments delimiter and lineterminator do?**

* **delimiter**: Specifies the character used to separate fields in the CSV file (default is ',').

writer = csv.writer(file, delimiter='\t') # Use tab as delimiter

* **lineterminator**: Specifies the character used to terminate lines (default is '\r\n').

writer = csv.writer(file, lineterminator='\n') # Use newline as line terminator

**6. What function takes a string of JSON data and returns a Python data structure?**

Use the json.loads() function:

import json

python\_data = json.loads(json\_string)

**7. What function takes a Python data structure and returns a string of JSON data?**

Use the json.dumps() function:

import json

json\_string = json.dumps(python\_data)