# PYTHON ASSIGNMENT – 13

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

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

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

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

**5. What do the keyword arguments delimiter and line terminator do?**

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

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

## SOLUTIONS

**1. Advantages of Excel Spreadsheets over CSV Spreadsheets:**

- **Formatting:** Excel allows for more advanced formatting options, including cell styles, colors, and formulas.
- **Multiple Sheets:** Excel supports multiple sheets within a single workbook.
- **Cell Types:** Excel can store different types of data in cells, including dates and formulas.

- **Charts and Graphs:** Excel provides built-in functionality for creating charts and graphs.

2. **Arguments for csv.reader() and csv.writer() Objects:**
   - For **csv.reader()**: Pass a file object opened in read mode.
   - For **csv.writer()**: Pass a file object opened in write mode.
3. **Modes for File Objects with CSV Reader and Writer:**
   - For reading: Open the file in text mode ('**rt**').
   - For writing: Open the file in text mode ('**wt**') or binary mode ('**wb**').
4. **Method to Write List to CSV File:**
   - The **writerow()** method is used to write a list of values as a row in a CSV file.
5. **Keyword Arguments delimiter and line terminator:**
   - **delimiter:** Specifies the character used to separate fields in a CSV file. The default is a comma (**,**).
   - **lineterminator:** Specifies the character used to terminate lines in a CSV file. The default is the newline character ('**\n**').
6. **Function to Convert JSON String to Python Data Structure:**
   - The **json.loads()** function is used to convert a JSON-formatted string to a Python data structure (typically a dictionary or a list).
   - import json
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   - json_string = '{"key": "value", "number": 42}'
   - python_data = json.loads(json_string)

**7. Function to Convert Python Data Structure to JSON String:**

- The **json.dumps()** function is used to convert a Python data structure to a JSON-formatted string.
- import json
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- python_data = {"key": "value", "number": 42}
- json_string = json.dumps(python_data)
- The **json.dumps()** function can also take additional parameters like **indent** to control the formatting of the output JSON string.