Assignment-13

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

Ans.

- Excel spreadsheets can store multiple sheets, while CSV files contain a single sheet of data.

- Excel supports formatting (colors, fonts, borders), formulas, and charts, which CSV files do not.

- Excel files can store complex data types (e.g., dates, numbers with specific formatting), while CSV files store plain text.

- Excel can also support embedded images and graphs, unlike CSV.

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

Ans. We pass a file object to both `csv.reader()` and `csv.writer()` to create reader and writer objects:

```
reader = csv.reader(file_object)
writer = csv.writer(file_object)
```

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

Ans.

- For `csv.reader()`, the file should be opened in 'r' (read) mode.

- For `csv.writer()`, the file should be opened in 'w' (write) mode.

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

Ans. The `writerow()` method is used to write a list to a CSV file:

```
writer.writerow(['column1', 'column2', 'column3'])
```

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

Ans.

(i) `delimiter`: Specifies the character used to separate fields in the CSV file (default is a comma `,`).

```
csv.writer(file_object, delimiter=';')
```

(ii) `line terminator`: Specifies the character(s) used to terminate lines in the CSV file (default is `'\n'`).

```
csv.writer(file_object, line terminator='\r\n')
```

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

Ans. The `json.loads()` function takes a string of JSON data and converts it into a Python data structure:

```
data = json.loads(json_string)
```

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

Ans. The `json.dumps()` function takes a Python data structure and returns a string of JSON data:

```
json_string = json.dumps(data)
```