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

1. Excel spreadsheets have several advantages over CSV spreadsheets, such as:

- They can contain multiple sheets within a single file

- They can have complex formatting, including colors, fonts, and borders

- They can contain formulas and functions that perform calculations on data

- They can be password protected to prevent unauthorized access or editing

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

To create reader and writer objects using the csv module, you pass a File object (or a file-like object) to csv.reader() or csv.writer(), respectively. For example:

```

import csv

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

reader = csv.reader(file)

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

writer = csv.writer(file)

```

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

File objects for reader and writer objects need to be opened in different modes. For a reader object, the file needs to be opened in read mode ('r'), while for a writer object, the file needs to be opened in write mode ('w'). It's important to note that the file should be opened with the 'newline' argument set to an empty string to prevent issues with line endings.

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

The writerow() method takes a list (or tuple) argument and writes it to a CSV file. For example:

```

import csv

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

writer = csv.writer(file)

writer.writerow(['Name', 'Age', 'Gender'])

writer.writerow(['Alice', '25', 'Female'])

writer.writerow(['Bob', '30', 'Male'])

```

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

The delimiter keyword argument specifies the character used to separate fields in the CSV file. The default delimiter is ',' (comma), but other characters can be used, such as tabs, semicolons, or pipes. The line terminator keyword argument specifies the character(s) used to terminate lines in the CSV file. The default line terminator is '\r\n' (carriage return + line feed), but other characters can be used, such as '\n' (line feed) or '\r' (carriage return).

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

The json.loads() function takes a string of JSON data and returns a Python data structure. For example:

```

import json

json\_data = '{"name": "Alice", "age": 25, "city": "New York"}'

data = json.loads(json\_data)

print(data) # {'name': 'Alice', 'age': 25, 'city': 'New York'}

```

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

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

```

import json

data = {'name': 'Alice', 'age': 25, 'city': 'New York'}

json\_data = json.dumps(data)

print(json\_data) # '{"name": "Alice", "age": 25, "city": "New York"}'

```