Python Basic- Assignment- 13

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

Answer:

A. Excel spreadsheets are much easier to use and navigate than CSV spreadsheets, as they allow for sorting and filtering of data, as well as the ability to perform calculations and make visualizations of data.
B. Excel spreadsheets are also able to store a wider variety of data types, such as dates, times, and images, than CSV spreadsheets.
C. Excel spreadsheets are able to handle larger datasets than CSV spreadsheets and are able to store more than one million rows of data.
D. Excel spreadsheets also have built-in tools and functions that can automate tasks, such as sorting data and creating charts.

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

Answer:

For csv.reader(), we need to pass an open file object that is readable, such as:

```
csv_reader = csv.reader(open("example.csv", "r"))
```

For csv.writer(), we need to pass an open file object that is writable, such as:

```
csv_writer = csv.writer(open("example.csv", "w"))
```

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

Answer:

For reading a file, the mode should be 'r' (for read). For example:

```
file = open("file.txt", "r")
```

For writing to a file, the mode should be 'w' (for write). For example:

```
file = open("file.txt", "w")
```


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

Answer:

The csv.writer() method can be used to write a list to a CSV file in Python.

Example:

```
import csv
# data to be written to a csv file
data = [['Name', 'Age'],
        ['James', '24'],
        ['John', '28']]

# open a file for writing
with open('data.csv', 'w', newline='') as file:
        # create a csv writer object
        csv_writer = csv.writer(file)

        # write data to csv file
        csv_writer.writerows(data)
```

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

Answer:

The keyword arguments delimiter and line terminator are parameters of the csv.writer() function in Python.

The 'delimiter' argument is used to specify the character used to separate fields in the CSV file. The default value is a comma, but it can be set to any character such as a semicolon, tab, etc. For example,

csv_writer = csv.writer(csv_file, delimiter=';')

The 'line terminator' argument is used to specify the character used to end lines in the CSV file. The default value is a newline character, but it can be set to any character such as a carriage return, etc. For example,

csv_writer = csv.writer(csv_file, line_terminator='\r')

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

Answer:

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

Example:

```
import json
json_data = '{"name": "John Smith", "age": 30}'
data = json.loads(json_data)
print(data)
# Output: {'name': 'John Smith', 'age': 30}
```

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

Answer:

The json.dumps() function takes a Python data structure (e.g. a dict, list, tuple) and returns a JSON string.

Example:

```
import json
data = {
  "name": "John Doe",
  "age": 25,
  "city": "New York"
}
json_data = json.dumps(data)
print(json_data)
# Output: {"name": "John Doe", "age": 25, "city": "New York"}
```


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