### JSON Exercises

#### Exercise 1: Reading a JSON File

1. Create a JSON file named `data.json` with the following content:

```json

{

"name": "John Doe",

"age": 30,

"city": "New York",

"skills": ["Python", "Machine Learning", "Data Analysis"]

}

```

2. Write a Python script to read and print the contents of the JSON file.

#### Exercise 2: Writing to a JSON File

1. Create a Python dictionary representing a person's profile:

```python

profile = {

"name": "Jane Smith",

"age": 28,

"city": "Los Angeles",

"hobbies": ["Photography", "Traveling", "Reading"]

}

```

2. Write a Python script to save this data to a JSON file named `profile.json`.

#### Exercise 3: Converting CSV to JSON

1. Using the `students.csv` file from the CSV exercises, write a Python script to read the file and convert the data to a list of dictionaries.

2. Save the list of dictionaries to a JSON file called `students.json`.

#### Exercise 4: Converting JSON to CSV

1. Using the `data.json` file from Exercise 1, write a Python script to read the JSON data.

2. Convert the JSON data to a CSV format and write it to a file named `data.csv`.

#### Exercise 5: Nested JSON Parsing

1. Create a JSON file named `books.json` with the following content:

```json

{

"books": [

{"title": "The Great Gatsby", "author": "F. Scott Fitzgerald", "year": 1925},

{"title": "War and Peace", "author": "Leo Tolstoy", "year": 1869},

{"title": "The Catcher in the Rye", "author": "J.D. Salinger", "year": 1951}

]

}

```

2. Write a Python script to read the JSON file and print the title of each book.