**ASSIGNMENTS-File Handling**

1. Given a CSV file containing sales data with columns for date, product, and sales amount, how would you read it into R and generate summary statistics such as total sales, average sales per product, and sales trends over time?

2. Suppose you have a JSON file containing data about customer transactions, but it's in a nested format with irregular structure. How would you clean and transform this data into a tidy format suitable for analysis in R?

3.Imagine you're provided with an Excel spreadsheet containing multiple sheets, each representing sales data for different regions. How would you read this spreadsheet into R, combine the data from different sheets, and perform analysis such as comparing sales performance across regions or identifying trends over time?

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5. Imagine you're provided with data related to customer orders stored in different file formats, including CSV, Excel, and JSON. How would you read and combine this data into a single dataset in R, ensuring consistency and accuracy for further analysis?

#customer\_orders.csv

customer\_id,order\_id,product,quantity,price,date

1,1001,Product A,2,10.50,2024-02-10

2,1002,Product B,1,15.75,2024-02-11

3,1003,Product C,3,8.99,2024-02-12

4,1004,Product A,1,10.50,2024-02-12

5,1005,Product B,2,15.75,2024-02-13

6,1006,Product C,1,8.99,2024-02-14

#customer\_orders.json

{

"transactions": [

{"customer\_id": 1, "order\_id": 1001, "product": "Product A", "quantity": 2, "price": 10.50, "date": "2024-02-10"},

{"customer\_id": 2, "order\_id": 1002, "product": "Product B", "quantity": 1, "price": 15.75, "date": "2024-02-11"},

{"customer\_id": 3, "order\_id": 1003, "product": "Product C", "quantity": 3, "price": 8.99, "date": "2024-02-12"},

{"customer\_id": 4, "order\_id": 1004, "product": "Product A", "quantity": 1, "price": 10.50, "date": "2024-02-12"},

{"customer\_id": 5, "order\_id": 1005, "product": "Product B", "quantity": 2, "price": 15.75, "date": "2024-02-13"},

{"customer\_id": 6, "order\_id": 1006, "product": "Product C", "quantity": 1, "price": 8.99, "date": "2024-02-14"}

]

}