



STUDENTS' UNION
TECHNICAL TEAM

Back-End Developer Recruitments

TASK 1

DEADLINE

17th Februaru, 2024

SUTT Backend Task 1: Mess Menu Parsing

Task Description:

You are tasked with creating a Python program to parse a provided Excel spreadsheet containing the mess menu and converting its contents into Python objects. The resulting Python objects must then be serialized into a JSON file.

Task Instructions

- 1. Excel Sheet parsing:** You are provided with an Excel spreadsheet that contains the mess menu with different days in different columns. You have to read and parse that data using either Pandas or Openpyxl (both are python libraries used extensively for excel and other data manipulation). Ensure that you handle any potential issues, such as missing data or data format inconsistencies, the mess menu has many such problems. Note: Make sure you exclude the "*****" in some rows. PS: YOU ARE NOT ALLOWED TO MODIFY THE EXCEL, UNLESS THERE IS SOME EXTREME ISSUE.

Mess Menu Here

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1. JSON Serialization: After successfully creating Python objects representing the menu items, you should serialize these objects into a JSON file. The format of this JSON file should be as follows:

```
[
  "Date1" : {
    "Breakfast" : [ ...Breakfast Items... ],
    "Lunch" : [ ...Lunch Items... ],
    "Dinner" : [ ...Dinner Items...]
  },
  "Date2" : {
    "Breakfast" : [ ...Breakfast Items... ],
    "Lunch" : [ ...Lunch Items... ],
    "Dinner" : [ ...Dinner Items...]
  },
  .....
]
```

A sample is provided on the next page.

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```
{
  "2025-02-01": {
    "BREAKFAST": [
      "CHOICE OF EGG",
      "CORNFLAKES",
      "BREAD +JAM",
      "SEVIYA UPMA",
      "SWEET DALIYA",
      "ADRAK CHUTNEY",
      "KINNOW",
      "TEA+ COFFEE",
      "Milk"
    ],
    "LUNCH": [
      "LEMON + ONION",
      "KHATTA MEETHA PUMPKIN",
      "CHOLE MASALA",
      "AJWAINI PURI / CHAPATI",
      "JEERA RICE",
      "SAMBAR",
      "MASALA CHAAS"
    ],
    "DINNER": [
      "PASTA SALAD (RED SAUCE)",
      "ALOO METHI",
      "DHABA DAL ",
      "CHAPATI",
      "PLAIN RICE",
      "RASAM",
      "SUJI HALWA"
    ]
  },
  ...
}
```

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Completion Requirements

- A Python script that accomplishes the tasks described above,
- A JSON file containing the menu items in the specified format,
- Documentation or comments in your code to explain the logic and usage of the script.

Your work will be evaluated based on the correctness of parsing, object creation, and JSON serialization, as well as the clarity and efficiency of your code.

Perform adequate testing to validate the correctness of the parsing, object creation, and the JSON serialization process.

Submission

You shall need to submit the task as a link to a public GitHub repository (Resource for learning to use Git can be found below). The submission form shall be provided at a date closer to the deadline.

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Learning Resources

[Getting Started With Git - Video](#)

[Getting Started With Git - Text](#)

If using Pandas:

[Pandas - Getting Started](#)

[Excel Parsing In Pandas - Video](#)

If using openpyxl:

[Excel Parsing Using openpyxl - Text](#)

[Excel Parsing Using openpyxl - Video](#)

[Learn About JSON - Video](#)

HAPPY CODING

