Product Requirements Document

Product Overview

1. Goal

To classify the headers of the Bill of Materials (BOM) table uploaded by users into the categories.

2. Material

The relationship between categories and BOM headers：

| Categories | **中文對照** | **BOM headers** |
| --- | --- | --- |
| Company Part No. | 公司料號 | Comp\_item, 元件料號, serial number, 子件代碼, 物料型號 |
| Part Description | 料號描述 | Description, Size/Dimension, Comment, Designator, 材料規格, 物料描述 |
| Part Net Weight | 料號淨重 | Net weight |
| Part Gross Weight | 料號毛重 | Gross weight |
| Net/Gross Unit | 淨毛重單位 | 單位,unit, Net weight unit,Gross weight unit |

Data：

* bom1.xlsx
* bom2.xlsx
* test\_bom.xlsx

2. User Workflow

2.1 User Story

When the users upload a new unseen BOM table e.g. test\_bom.xlsx, your service needs to classify the headers to corresponding categories.

**AC (Acceptance criteria) 1**

List the categories that are matched with its BOM headers.

**AC 2**

List the categories that are not matched.

**AC 3**

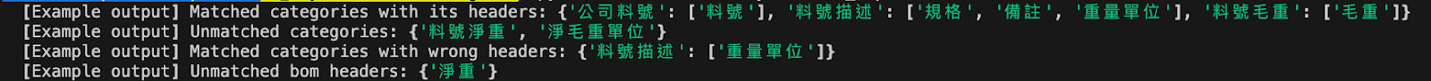
List the categories that are matched with wrong headers.

**AC 4**

List the header from the uploaded BOM data that the system cannot recognize or classify

3. Output

3.1 Example Output



3.2 The true/correct relationship between the test\_bom.xlsx headers and pre-defined categories.

| Categories | **中文對照** | **BOM headers** |
| --- | --- | --- |
| Company Part No. | 公司料號 | 料號 |
| Part Description | 料號描述 | 規格, 備註 |
| Part Net Weight | 料號淨重 | 淨重 |
| Part Gross Weight | 料號毛重 | 毛重 |
| Net/Gross Unit | 淨毛重單位 | 重量單位 |

3.3 Submitted files

Should be files of ipynb (Python notebook) or typical python file

**Notes：**

Be creative to think outside the box, you can utilize various approaches such as ML, NN, rule-based, hybrid and even LLM ,etc. Result is not the most important evaluation criteria, it is more about the demonstration of thinking and problem solving processes.