Database Schema Documentation

Important Points:
1. The SQL choosen is MySQL Community Server 8.0.15
2. Given from doc:
    * The three columns SUPPLIER_ID, PRODUCT_ID and QUANTITY are fixed in all feeds
    * Combination of SUPPLIER_ID and PRODUCT_ID is Primary Key
    * N number of columns can be present in each supplier file which is not known initially

Database Design:

* Duplicate inserts are ignored.

* TABLE1.SUPPLIER_PRODUCT is the main table

* Since the columns are invariable/different on each feed we have another TABLE2.SUPPLIER_PRODUCT_OTHER_FEEDS, since the table 1 has composite primary key,
table2 also must have reference to the composite combination.

* Foreign Key Constraint- during TABLE2.SUPPLIER_PRODUCT_OTHER_FEEDS creation:
    ## FOREIGN KEY(SUPPLIER_ID, PRODUCT_ID) REFERENCES SUPPLIER_PRODUCT(SUPPLIER_ID, PRODUCT_ID)

* There is one more column called column.Feeds in table2- Since the file feeds contain abnormal columns make a Key<Column>: Value<ColumnValue> pair in Tab-Delimiter separated for a row and then store the entire row. Either of the following data-type can be used for column.Feeds:
→ TEXT datatype: Max 65,535 characters
→ BLOB datatype: Stored in binary, no use if queried from DB. Not recommended.
→ JSON datatype: Mysql provides a simplified way to handle the problem. I recommend this. Can be queried from DB interface as well.

* Triggers: After Batch Insert statements, a after-trigger is enabled to do logging; TABLE3.LOG_TRANS is used. Trigger.TRIG_INSERT to create a transaction ID and log each inserts.

Table2.SUPPLIER_PRODUCT_OTHER_FEEDS

SUPPLIER_ID	PRODUCT_ID	Feeds

Table1.SUPPLIER_PRODUCT

SUPPLIER_ID	PRODUCT_ID	Quantity

Trigger.TRIG_INSERT

Table3.LOG_TRANS

TranscationID	TimeStamp	Success