**Insights on mySQL using Global Trade Item Number (GTIN) data structures**

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**Abstract**

MySQL is a popular open source database format. GTIN (Global Trade Item Number) is a family of product ID codes, used worldwide between trading partners, to identify products via linear or 2D barcodes on the product or packaging. This project will provide insight and first impressions on the ease of use of mySQL using GTIN example data.

An open source GTIN subset > 100K records (.csv, .sql, or JSON format) will be downloaded and installed on a local mySQL database instance. Open source documentation will be reviewed to better understand the GTIN data. The schema will be checked for normalization and modified if necessary, Primary and foreign key indexes will be created/modified as needed. A graphical schema of the database will be created with example data from each table to visualize the relationship between tables. Exploratory queries will be created to summarize selected fields such as brand, and packaging level. A summary list of mySQL commands used in the analysis will be provided along with impressions on ease of use, intuitiveness, and effectiveness.

**Proposed Outline**

Introduction, why the GTIN dataset, (open source, 1M + records, a variety of tables. Where we got our tables, steps to load it. Steps to import BSIN code in JSON <http://brand-okfn.herokuapp.com/brand/>

Investigate webhosted version like something here <https://www.000webhost.com/>

Background on GTIN, who uses it, can we find/estimate worldwide usage. Describe format (companycode Itemcode) How many unique companies and itemID’s can it encode. Appears that there is not an open source version of the complete database, trading partners publish their data to companies selling the products?

EER diagram– Randy working on this. Steps in MySQL to create EER, Reverse engineering didn’t work. Data Export to SQL, import mysql reverse engineer script does work, steps to explore and define relationships. Explanation of nearly empty Skeleton tables found with just a few records

EER Graphic

Queries: Basic stats on each table, records, keys, do we need to add indexes? File size of zipped, unzipped, and MySQL database. Create several example summary queries, a few charts. Use Excel PowerQuery for charts, need to install SQL connector <https://support.office.com/en-gb/article/Connect-to-a-MySQL-database-Power-Query-8760c647-88b9-409d-b312-6ea8f84a269b?ui=en-US&rs=en-GB&ad=GB>

Summary, what we learned with each of us working on our own local copy, vs a web version if we can get that working.

Challenges, what we liked, didn’t like.