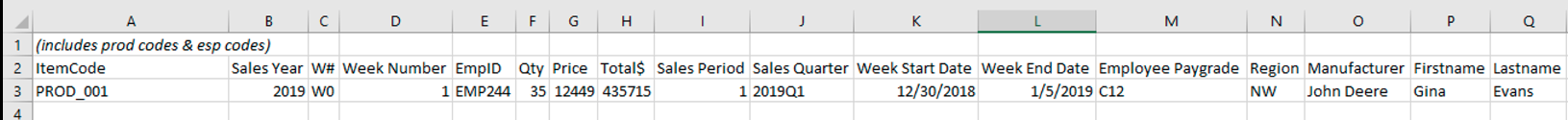
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**TractorTEK** has recently reconstructed their Sales Decision Support System, in record time by any measure, with the aid of capable TEKsystems Data Analytics consultants. Determined to evolve the current system into a full-scale Enterprise Analytics Platform, they’ve become repeat customers and are seeking a longer-term strategy going forward from the same team.

Top of mind is how to level up their data processing capabilities in a way that scales. This means finding a tool set that integrates with a wide range of disparate source systems and reporting systems. They intend to connect to SQL Databases, Excel files, and various text file repositories; then process the data, and expose the data to reporting tools such as Tableau and Power BI. Most department analyst teams have non-coders used to Excel and some SQL. A couple teams have some data scientists that use the usual toolsets (Python, R).

You’re tasked with preparing a very basic proof of concept for a tool that right in TEK’s wheelhouse: **Alteryx**. Using the dataset previously used for the Capstone, and the Subject Matter Expertise bestowed upon you by guest lecturer Michael Perillo and Udemy, please do the following exercises:

1. **Demo** how easy it is to process data. Take each of the raw Capstone datasets *directly from* Excel, and process them into a CSV format that’s suitable for ingestion to a database or by any Data Visualization tool. Do so by recreating this table structure in Alteryx. **Show your work** with clearly labeled workflow steps and comments.



1. Building off of that demo, explain in plain English the ways in which Alteryx may streamline a company’s ability to do large scale data processing quickly. Provide no more than 2-3 paragraphs tops. Factors should include but are not limited to:
   1. The comparable effort it would take to build a SQL database that does the same thing.
   2. Accessibility by coders and non-coders, in contrast to Excel and Python.
   3. Auditability & traceability. How can Alteryx facilitate trust internally and externally (government auditors) that data processing is reliable and transparent?
2. Build upon the first demo: relocate ESP codes so that ItemCode column now only has Prod Codes, and there are new columns ESPCode, ESP Qty, ESP Price, ESP Totals as follows:
   1. Table

      Description automatically generated
3. Develop a basic data visualization in Alteryx with a header, and two static tables (no need for dynamic buttons):
   1. Sales Attachment Rates by Region
   2. Sales Attachment Rates by Employee broken into two categories: “Top 2 Performers” and “Bottom 3 Performers”. This will require that you create some additional fields from Step 3.

Your submission should include an Alteryx file and a word file each with naming scheme “hw4\_lastname”, saved to a Github repo.