**SBG Data Warehouse Craft Demonstration**

**User Story:**

* Given some clickstream browser data, we would like to get some insights on user behavior based on analysis of the data.

**General Context:**

* We develop and operate a hypothetical web-based SaaS application. Over the course of a few weeks, we’ve captured the clickstream data from users’ browsers and would like you to answer several questions by analyzing this data using certain requirements.
* The data is provided in three files: ClickStream\_Sample.csv, Browser\_Sample.csv, and OperatingSystem\_Sample.csv.

Please provide the following:

1. Draw a diagram showing how you would model this data in a relational database. Be prepared to explain your choices.
2. Load the files into a relational database.

**Answer the following questions using the data in the relational database. Make your code flexible enough to answer similar questions.**

* How many transactions occurred between September 25, 2013 and September 30, 2013 inclusive? Note: Each record in the file is one transaction. The hit\_timestamp column contains the transaction date.
* What is the average length in seconds of all the transactions that occurred between September 25, 2013 and September 30, 2013 inclusive?
* How many unique visitors used the Chrome browser (any version)? Note: One visitor may have multiple transactions in the file.
* What was the most used operating system & browser combination for all dates included in the clickstream data?
* How many transactions were done using the Macintosh operating system? Note: Use only the data contained in the clickstream file in the query. The result of the query should be one row.
* How many unique visitors had transactions per day per major browser? For example, for "Chrome 28.7”, the major browser would be "Chrome”.

**When you have finished the Craft Demo, please email your solution to both of us:**

* Sunil Goplani, [sunil\_goplani@intuit.com](mailto:sunil_goplani@intuit.com)
* Bryan Nguyen, [bryan\_nguyen@intuit.com](mailto:bryan_nguyen@intuit.com)