**Extensibility**

**Adding a Table**

1. Add the new table in Google BigQuery.
2. Open the constants.js file
3. In between “Merquery.databaseConstants.query”, add a new set of variables for category, columnNames, fromStatement, groupByStatement, placeholder, identifier, numOfColumn, and identifierColumn.
4. For category, select an appropriate name for the new table. This name will appear on the left navigation so be sure to capitalize the first character.
   1. For example, “Address”
5. For columnNames, list all the names of the columns from the new table. Be sure to put your newly created category name with a period before the column name.
   1. For example, “Address.Address1” or “Campaign.campaign\_id”
6. The fromStatement should be the select statement that will be sent to Google BigQuery.
   1. For example, “(SELECT emailmd5, Address1, Address2, City, State, Zip FROM [formal-cascade-571:uci.address\_info]) AS Address ON Address.emailmd5 = Demogrpahics.emailmd5”
   2. Be sure to put the new created category name at the end of the select statement “AS Address”
   3. Make sure to join on emailmd5, “ON Address.emailmd5 = Demogrpahics.emailmd5”
7. The groupByStatement should be the exact same order as all the columns listed in the columnNames variable.
8. For placeholder, list an example for each column in the new table. This value will appear in the left navigation in order to guide the user on how to search the new table.
9. For numOfColumns, count the number of columns in the new table. Remember that the number zero also counts as a column.
10. For the identifierColumn, list the column number of the unique column in the table.
    1. For example, for the Address table the unique identifier column is the Address1 column. So we would list a “0” since it is the first column in the table.

**Adding columns to an existing table**

1. Add the new column in the Google BiqQuery table.
2. Open the constants.js file
3. Identify which block of variables to modify under the “Merquery.databaseConstants.query” variable.
4. For columnNames, add the name of the newly created column. Be sure to put your newly created category name with a period before the column name.
   1. For example, “Address.Address1” or “Campaign.campaign\_id”
5. For fromStatement, add the new column in the select statement.
6. The groupByStatement should be the exact same order as all the columns listed in the columnNames variable.
7. For placeholder, add a new value for the newly added column.
8. For the numOfColumns, increment the current value.
9. For the identifierColumn, if the newly added column is the identifier column, then replace the current value; otherwise, no change is needed.

**Deleting column from an existing table**

1. Delete the column in the Google BiqQuery table.
2. Open the constants.js file
3. Identify which block of variables to modify under the “Merquery.databaseConstants.query” variable.
4. For columnNames, delete the name of the desired column.
5. For fromStatement, delete the name of the desired column from the select statement.
6. The groupByStatement should be the exact same order as all the columns listed in the columnNames variable. Ensure that you delete the desired column.
7. For placeholder, delete the value associated to the deleted column.
8. For the numOfColumns, decrement the current value.
9. For the identifierColumn, if the newly deleted column is the identifier column, then replace the current value; otherwise, no change is needed.