Quickstart using the Cloud Console

cloud.google.com/bigquery/docs/quickstarts/quickstart-web-ui

You can use the Google Cloud Console as a visual interface to complete tasks like running queries, loading data, and exporting data. This quickstart shows you how to query tables in a public dataset and how to load sample data into BigQuery using the Cloud Console.

Before you begin

1. In the Google Cloud Console, on the project selector page, select or create a Google Cloud project.

   Note: If you don't plan to keep the resources that you create in this procedure, create a project instead of selecting an existing project. After you finish these steps, you can delete the project, removing all resources associated with the project.
   Go to project selector

2. BigQuery is automatically enabled in new projects. To activate BigQuery in a preexisting project, go to Enable the BigQuery API.
   Enable the API

3. Optional: Enable billing for the project. If you don't want to enable billing or provide a credit card, the steps in this document still work. BigQuery provides a sandbox to perform the steps.

Query a public dataset

The Cloud Console provides an interface to query tables, including public datasets offered by BigQuery.

In this example, you query the USA Name Data public dataset to determine the most common names in the US between 1910 and 2013.

BigQuery public datasets are displayed by default in the Cloud Console. To open the public datasets project manually, enter the following URL in your browser.

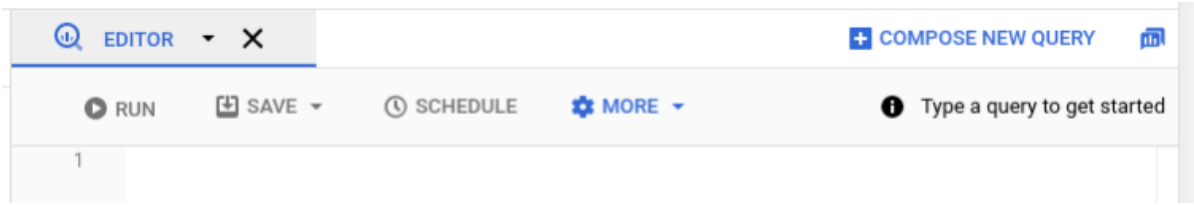
```
https://console.cloud.google.com/bigquery?p=bigquery-public-data&page=project
```

To query data in a public dataset, follow these steps:

1. Go to the BigQuery page in the Cloud Console.

   Go to the BigQuery page

2. If the **Editor** tab isn't visible, then click **Compose new query** add_box.

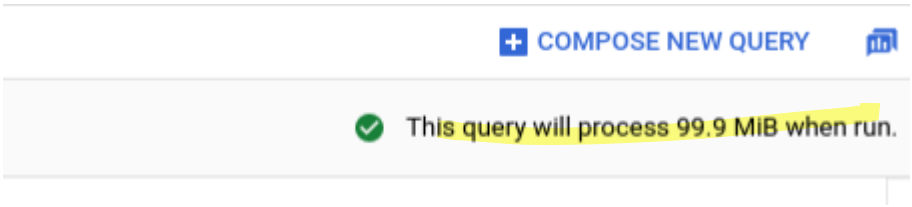


Note: The default experience is the Preview Cloud Console. If you clicked **Hide preview features** to go to the Generally Available Cloud Console, then the **Query editor** is not displayed in a tab. If it's not visible, then click **Show editor**.

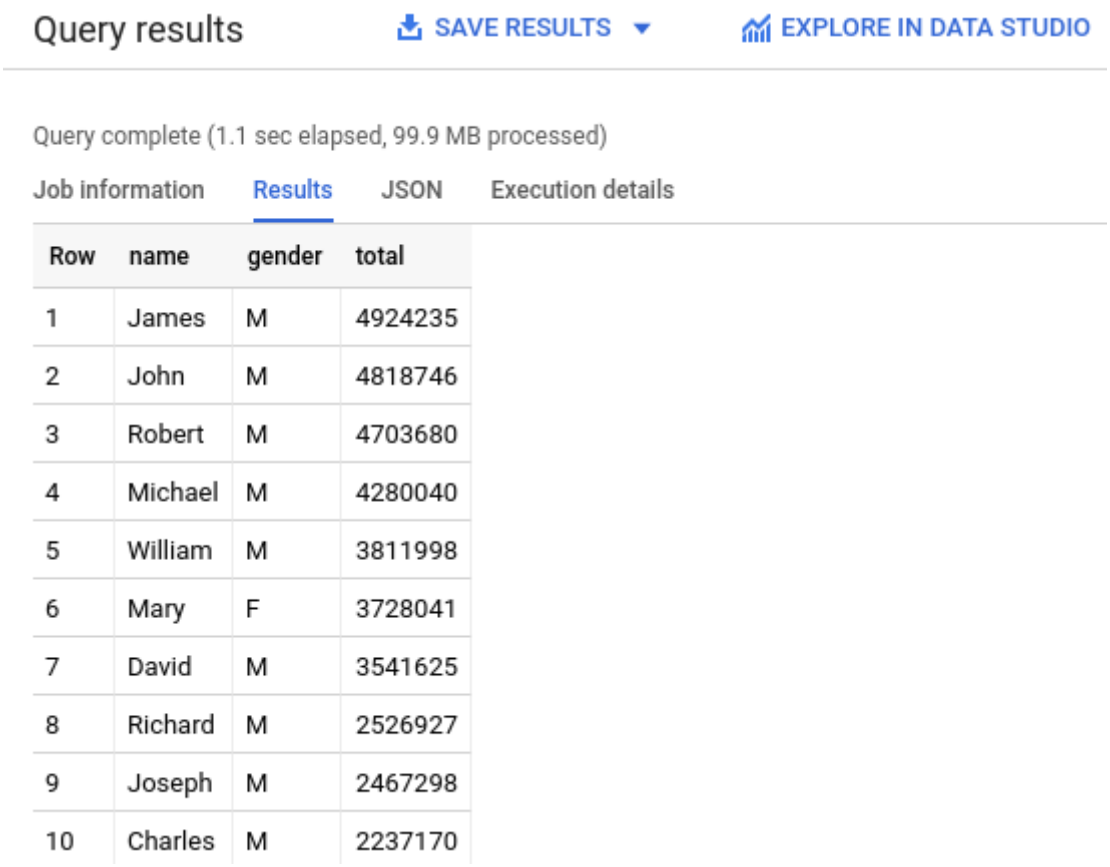
3. Copy and paste the following query into the **Editor** field.

```
SELECT
  name, gender,
  SUM(number) AS total
FROM
  `bigquery-public-data.usa_names.usa_1910_2013`
GROUP BY
  name, gender
ORDER BY
  total DESC
LIMIT
  10
```

4. If the query is valid, then a check mark appears along with the amount of data that the query will process. This metric helps you determine the cost of running the query. If the query is invalid, then an exclamation point appears along with an error message.



5. Click **Run**. The query results page appears below the query window. At the top of the query results page, the time elapsed and the data processed by the query are displayed. Below the `Query complete...` message, a table displays the query results with a header row containing the name of each column you selected in the query.



Row	name	gender	total
1	James	M	4924235
2	John	M	4818746
3	Robert	M	4703680
4	Michael	M	4280040
5	William	M	3811998
6	Mary	F	3728041
7	David	M	3541625
8	Richard	M	2526927
9	Joseph	M	2467298
10	Charles	M	2237170

Load data into a table

Next, load data into a table and query it.

Download the data

The file you're downloading contains approximately 7 MB of data about popular baby names, and it is provided by the US Social Security Administration.

1. Download the baby names zip file.
2. Extract the file onto your machine.

   The zip file contains a `NationalReadMe.pdf` file that describes the dataset. Learn more about the dataset.
3. Open the file named `yob2014.txt` to see what the data looks like. The file is a comma-separated value (CSV) file with the following three columns: name, sex (`M` or `F`), and number of children with that name. The file has no header row.
4. Note the location of the `yob2014.txt` file so that you can find it later.

Create a dataset

Next, create a dataset in the Cloud Console to store the data.

1. If necessary, open the BigQuery page in the Cloud Console.

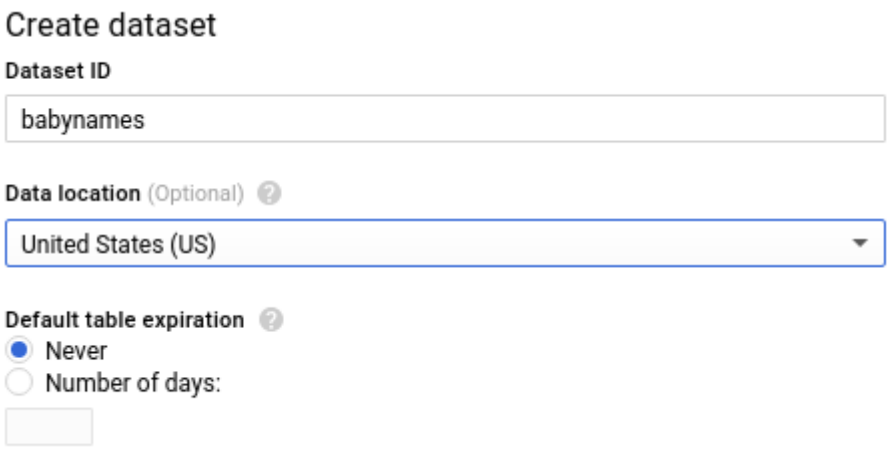
   Go to the BigQuery page

2. In the **Explorer** panel, click your project name.

   Note: The default experience is the Preview Cloud Console. If you clicked **Hide preview features** to go to the Generally Available Cloud Console, then perform the following step instead: In the navigation panel, in the **Resources** section, click your project name.
3. Expand the more_vert **Actions** option and click **Create dataset**.

4. On the **Create dataset** page, do the following:

   - For **Dataset ID**, enter `babynames` .
   - For **Data location**, choose **United States (US)**. Currently, the public datasets are stored in the `US` multi-region location. For simplicity, place your dataset in the same location.



5. Leave all of the other default settings in place and click **Create dataset**.

Load the data into a new table

Next, load the data into a new table.

1. In the **Explorer** panel, click the **babynames** dataset that you created.

   Note: The default experience is the Preview Cloud Console. If you clicked **Hide preview features** to go to the Generally Available Cloud Console, then perform the following step instead: In the navigation panel, in the **Resources** section, click the **babynames** dataset that you created.
2. Expand the more_vert **Actions** option and click **Open**.

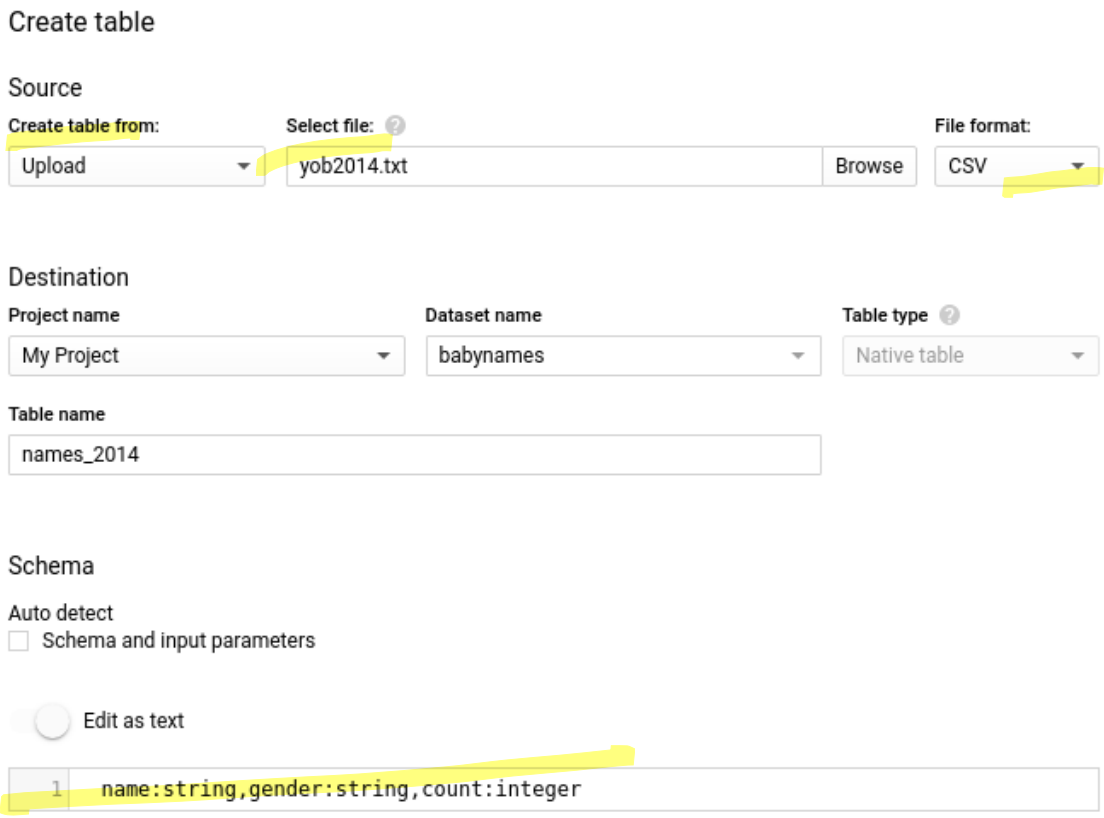
3. In the details panel, click **Create table** add_box.

   Use the default values for all settings unless otherwise indicated.

4. On the **Create table** page, do the following:

   - In the **Source** section, for **Create table from**, choose **Upload**.
   - For **Select file**, click **Browse**, navigate to the `yob2014.txt` file, and click **Open**.
   - For **File format**, choose **CSV**.
   - In the **Destination** section, for **Table name**, enter `names_2014`.
   - In the **Schema** section, click the **Edit as text** toggle and paste the following schema definition into the box.

     ```
     name:string,gender:string,count:integer
     ```



5. Click **Create table**.

6. Wait for BigQuery to create the table and load the data. When BigQuery finishes loading the data, a check mark appears in the **Job history** panel.

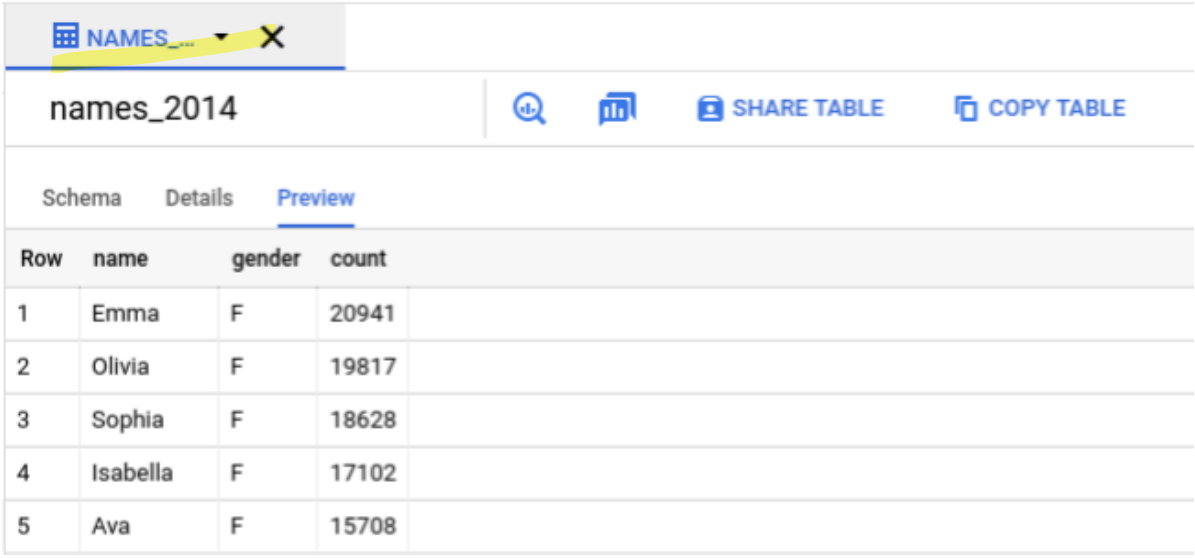
   Note: The default experience is the Preview Cloud Console. If you clicked **Hide preview features** to go to the Generally Available Cloud Console, then while BigQuery loads the data, a `(1 running)` string displays beside the job history in the navigation panel. The string disappears after the data is loaded.

Preview the table

To preview the first few rows of the data, follow these steps:

1. In the **Explorer** panel, expand **babynames** and select **names_2014**.

   Note: The default experience is the Preview Cloud Console. If you clicked **Hide preview features** to go to the Generally Available Cloud Console, then perform the following step instead: In the navigation panel, select **babynames** > **names_2014**.
2. In the details panel, click **Preview**. BigQuery displays the first few rows of the table.



Query the table

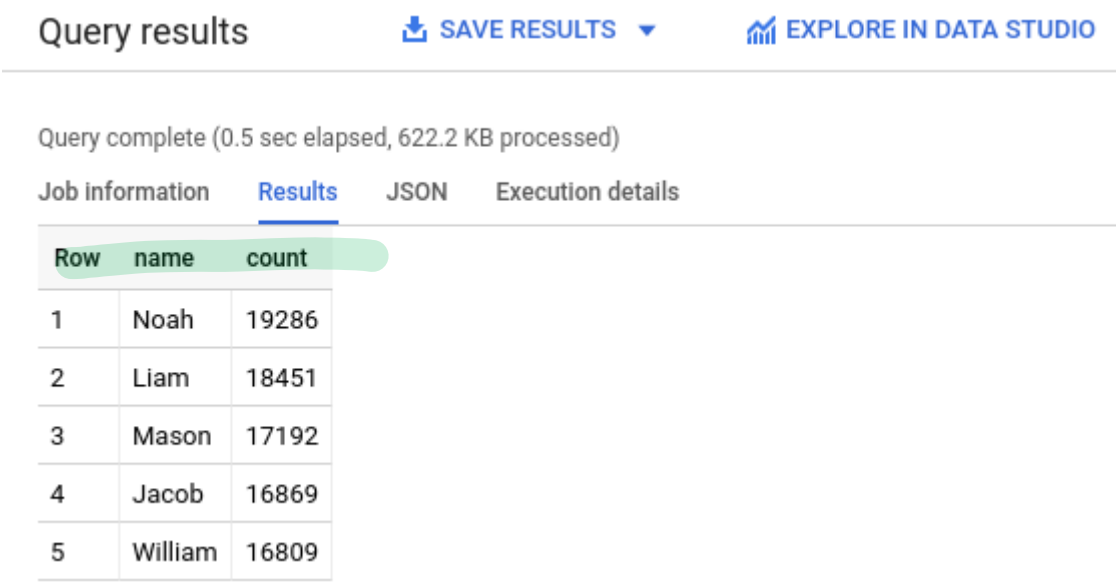
Now that you've loaded data into a table, you can query it. The process is identical to the previous example, except that this time, you're querying your table instead of a public table.

1. Click **Compose new query** add_box. A new query editor tab opens.

   Note: Alternatively, select a table in the **Explorer** panel and click **Query table**. A new tab opens that is already populated with a partially complete query for the selected table.
2. Copy and paste the following query into the query text area. This query retrieves the top five baby names for US males in 2014.

```
SELECT
  name,
  count
FROM
  `babynames.names_2014`
WHERE
  gender = 'M'
ORDER BY
  count DESC
LIMIT
  5
```

3. Click **Run**. The results are displayed below the query window.



Row	name	count
1	Noah	19286
2	Liam	18451
3	Mason	17192
4	Jacob	16869
5	William	16809

Clean up

To avoid incurring charges to your Google Cloud account for the resources used in this quickstart, follow these steps.

1. If necessary, open the BigQuery page in the Cloud Console.

   Go to the BigQuery page

2. In the **Explorer** panel, click the **babynames** dataset that you created.

   Note: The default experience is the Preview Cloud Console. If you clicked **Hide preview features** to go to the Generally Available Cloud Console, then perform the following step instead: In the navigation panel, in the **Resources** section, click the **babynames** dataset that you created.

3. Expand the more_vert **Actions** option and click **Delete**.

4. In the **Delete dataset** dialog, confirm the delete command by typing the name of your dataset (`babynames`) and click **Delete**. This action deletes the dataset, the table, and all the data.

What's next

- To learn more about using the Cloud Console, see Using the Cloud Console.
- To learn how to load a JSON file with nested and repeated data, see Loading nested and repeated JSON data.
- To learn more about loading data into BigQuery, see Introduction to loading data.
- To learn more about querying data, see Overview of querying BigQuery data.

- To learn more about accessing BigQuery programmatically, see the REST API reference or the BigQuery client libraries page.