Tableau Introduction-Assignment 2

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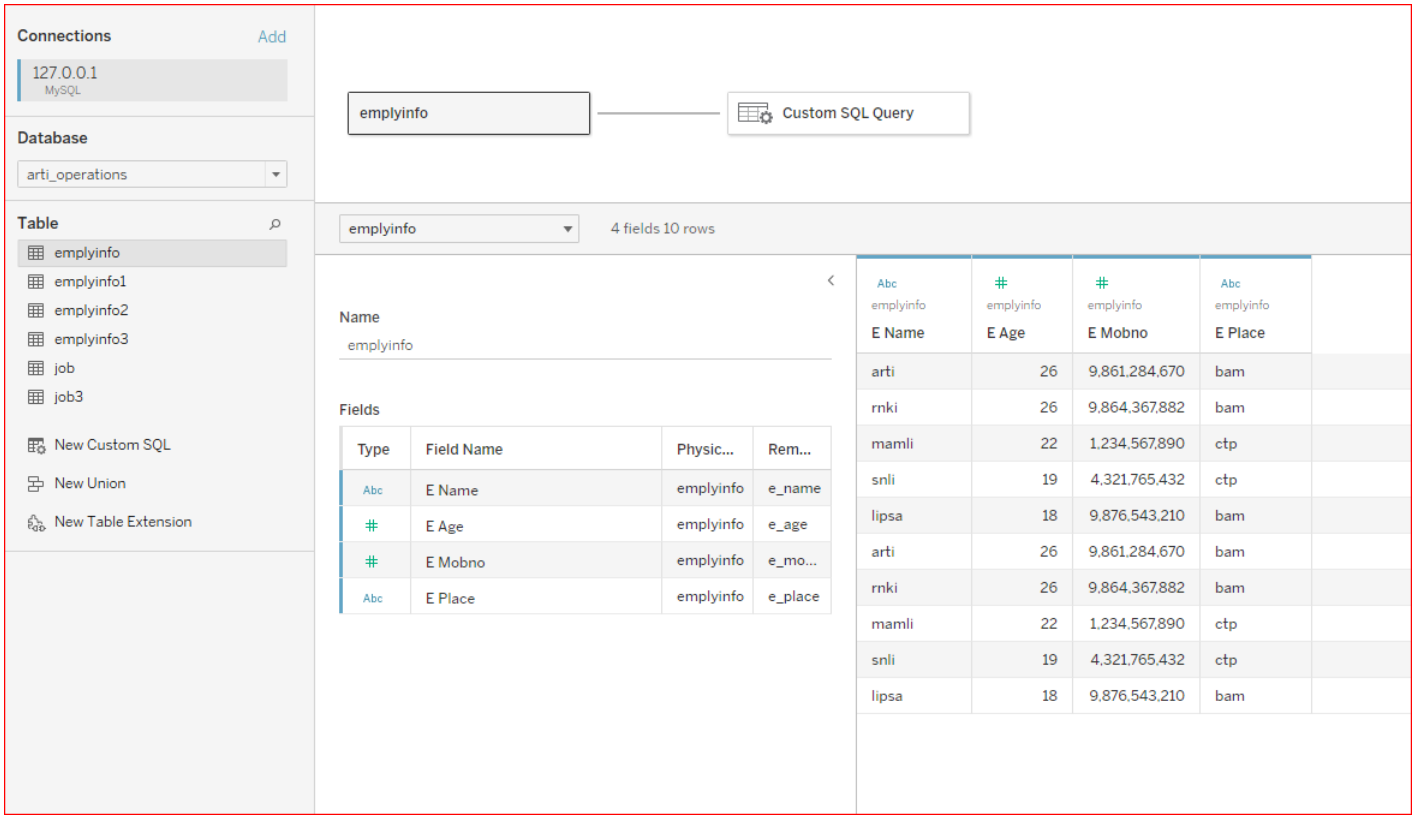
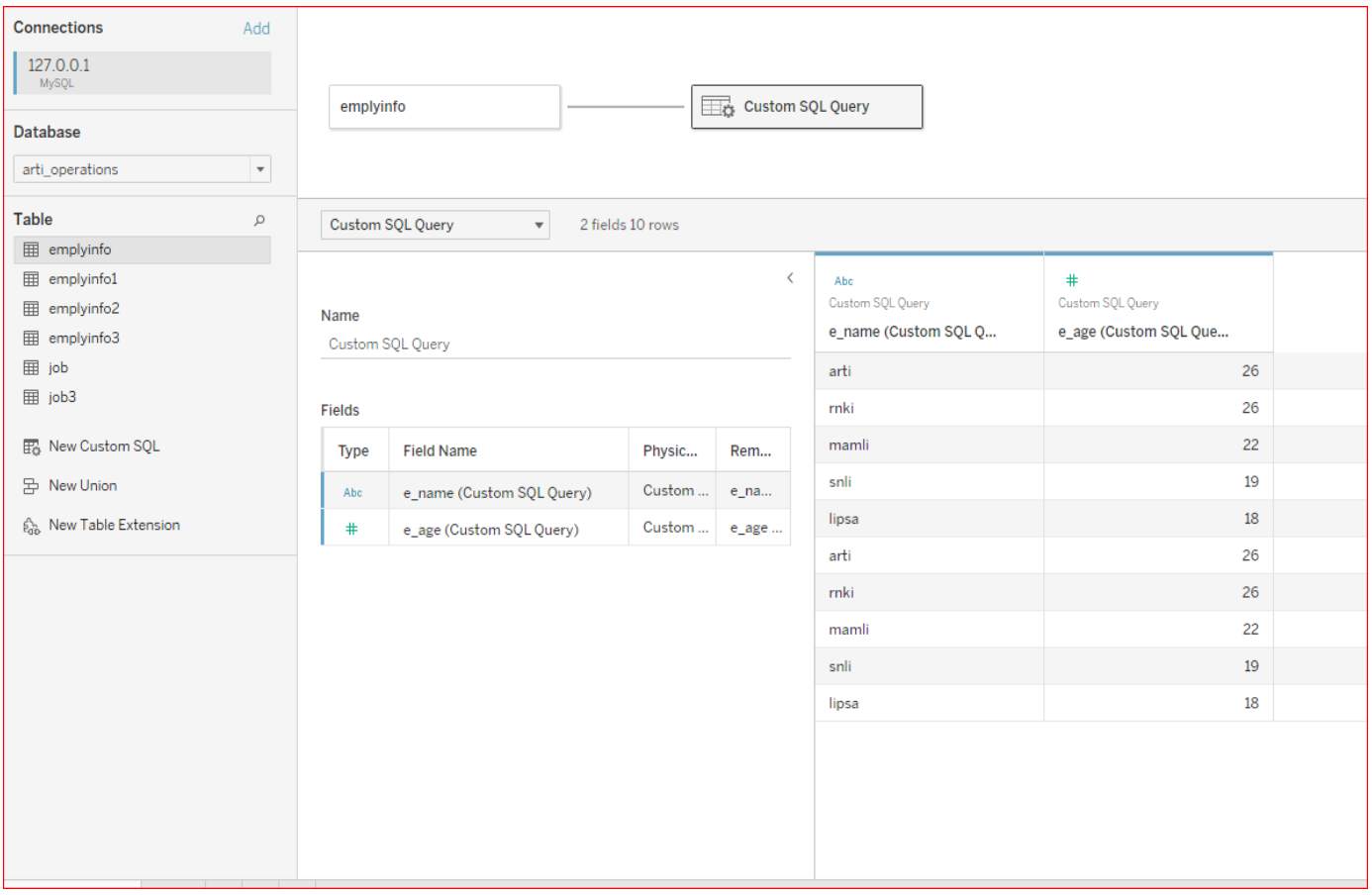
1. **With the help of the databases of your choice, illustrate the data connection process with a SQL and a NoSQL database server in Tableau. Also, compare the pros and cons of using a SQL database server and a NoSQL database server.**

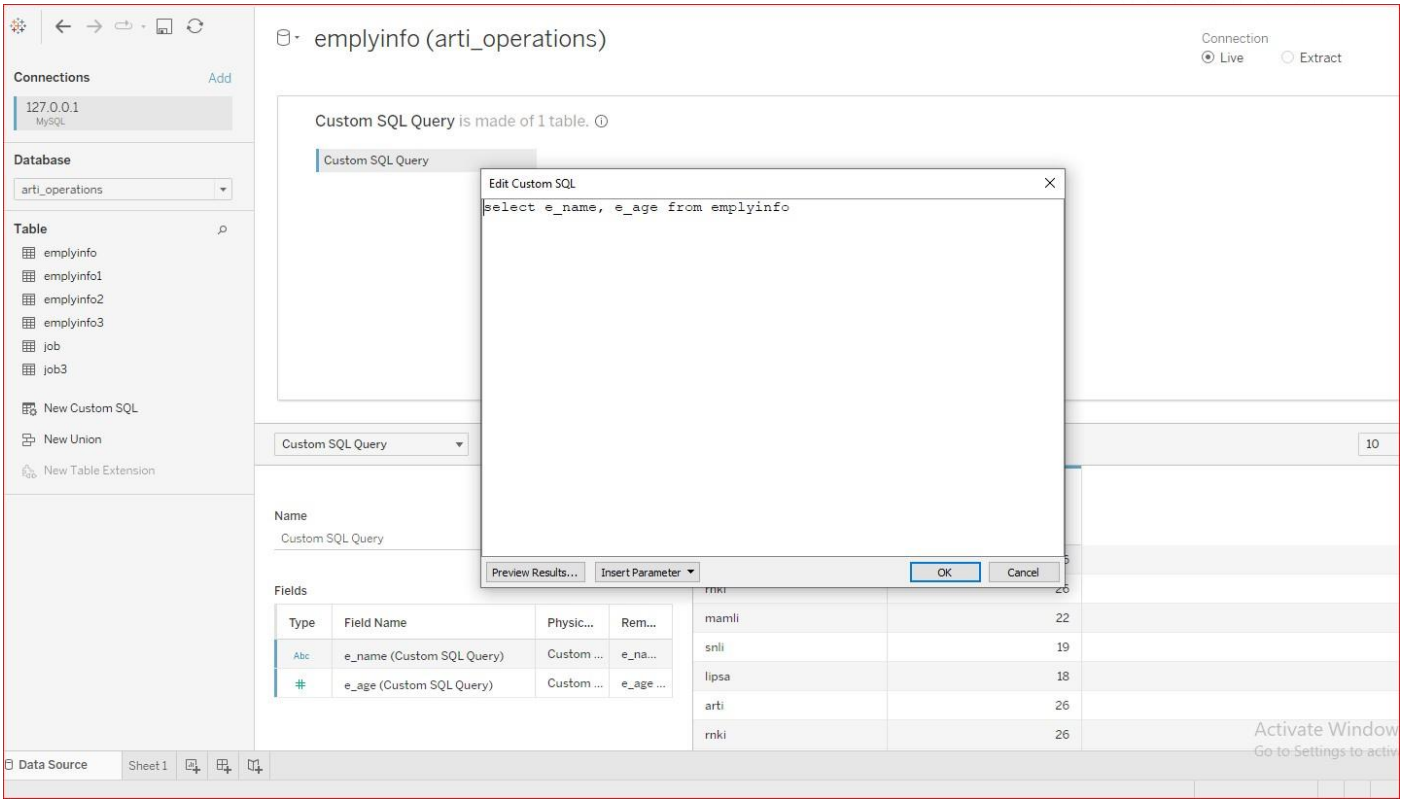
- SQL is the programming language used to interface with Relational Databases. In Relational Database Model, data as records are stored in rows and column-like table structures with logical links between them.
    - Some examples of SQL databases include MySQL, Oracle, PostgreSQL, and Microsoft SQL Server. SQL is a user-friendly language that can be accomplished by simple keywords with little to no coding required.
    - Need to continually increase large space in the hard drive as data grows and faster machines to run the query or processes.
- NoSQL is a class of DBMS that is non-Relational and generally does not use SQL. Data and records are stored in document-based, graph-based file structures.
    - NoSQL database examples include MongoDB, BigTable, Redis, RavenDB Cassandra, HBase, Neo4j, and CouchDB. NoSQL databases provide affordable options for many organizations.
    - NoSQL queries likely require programming experience. This means more technical and costly staff, like developers or data scientists, will need to perform queries.

2. **Connect with the SQL database server of your choice and establish a connection with a dummy database "Employee" containing employee information (employee name, employee id, employee salary, employee department, employee years of experience) in a company. Write an SQL statement using tableau's custom SQL feature to retrieve the employee id and employee salary in your tableau dashboard.**

- I do not have SQL Server, so I have connected with MySQL Workbench with an SQL server, username, and password.



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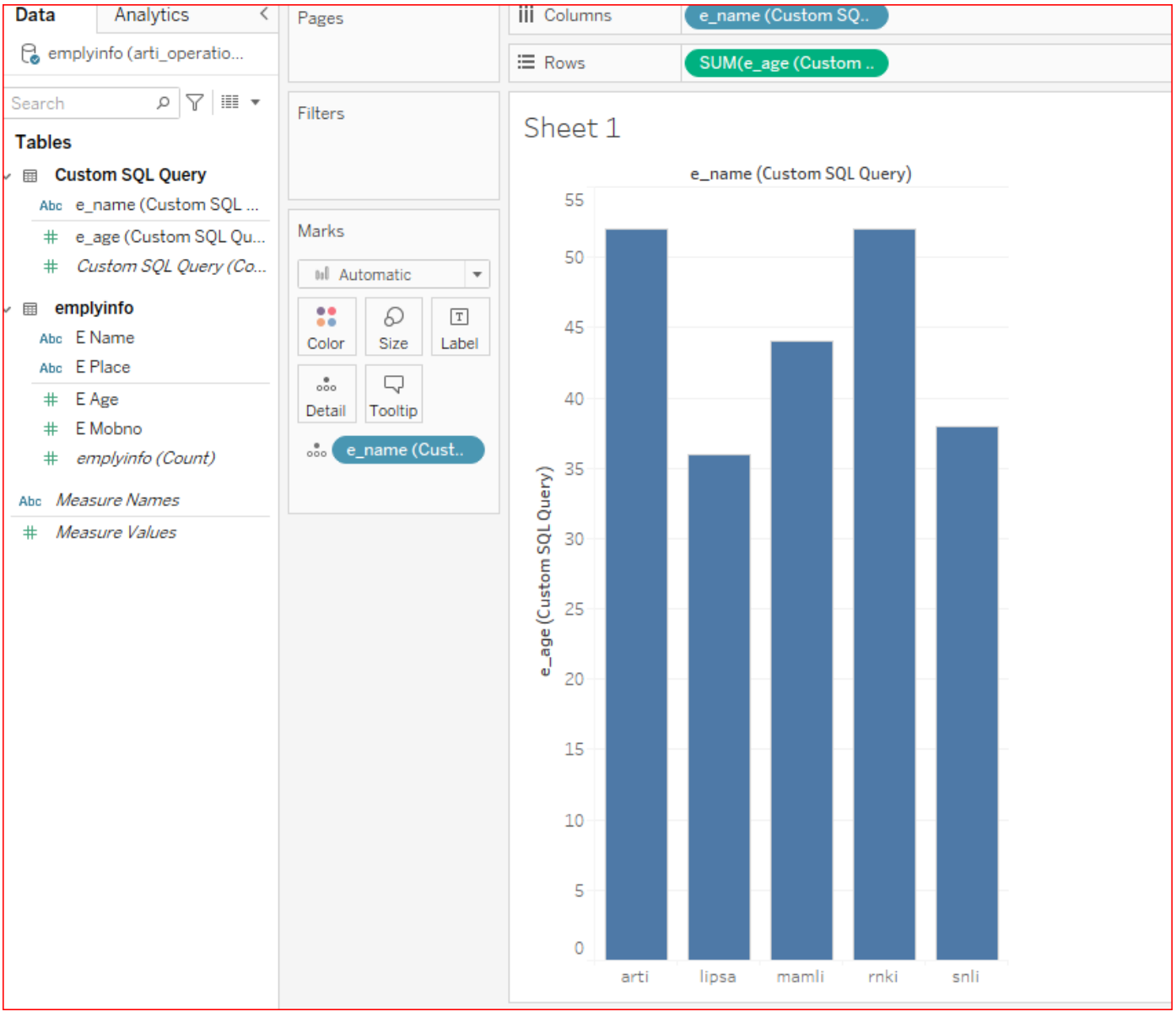
Data Source
Sheet 1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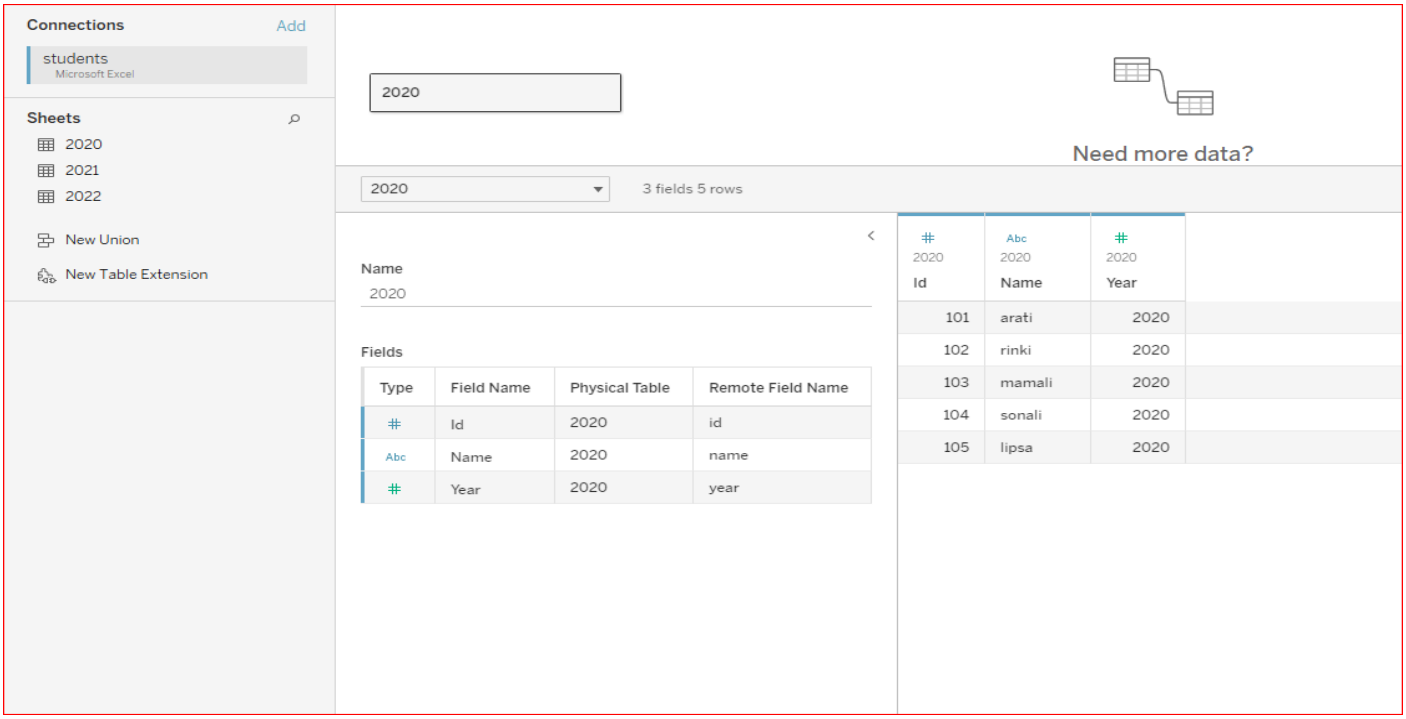
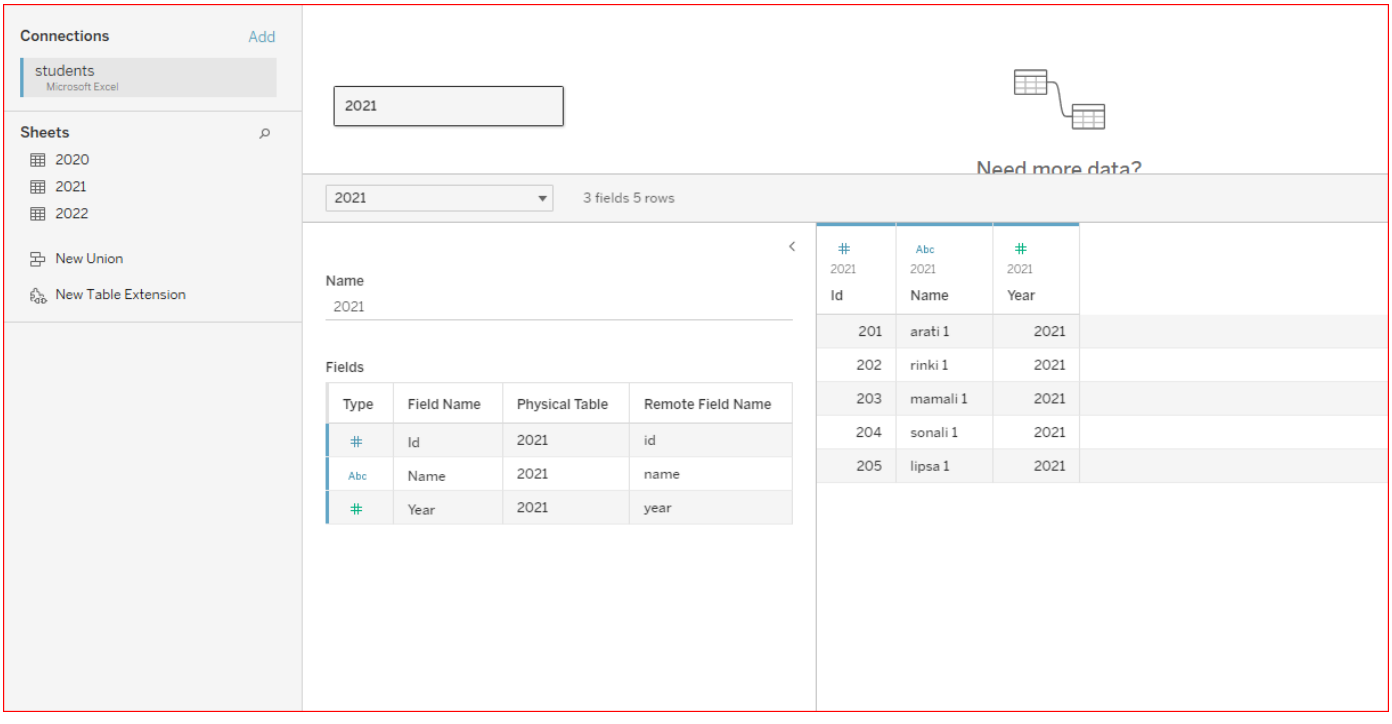
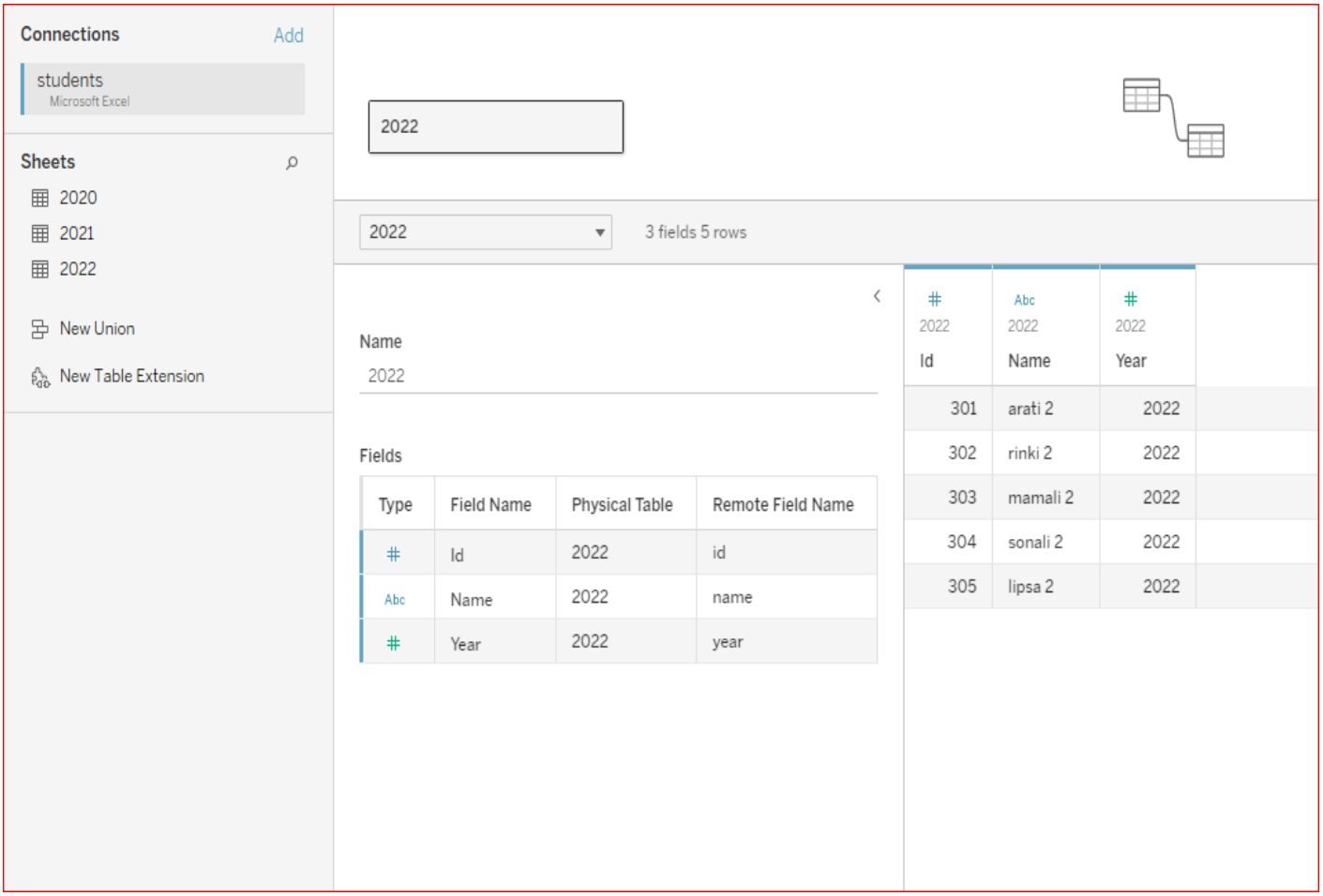
3. **Imagine you are tasked with maintaining year-wise data of new students that join a certain college. Create three separate excel tables containing data of students for three consecutive years, one for each year, and store it in a common database. Using the features available on the data source page of Tableau, join these tables with the same headers and create a single table.**

- I have created 3 tables 2020,2021,2022 of student details and join them by UNION with same header columns.



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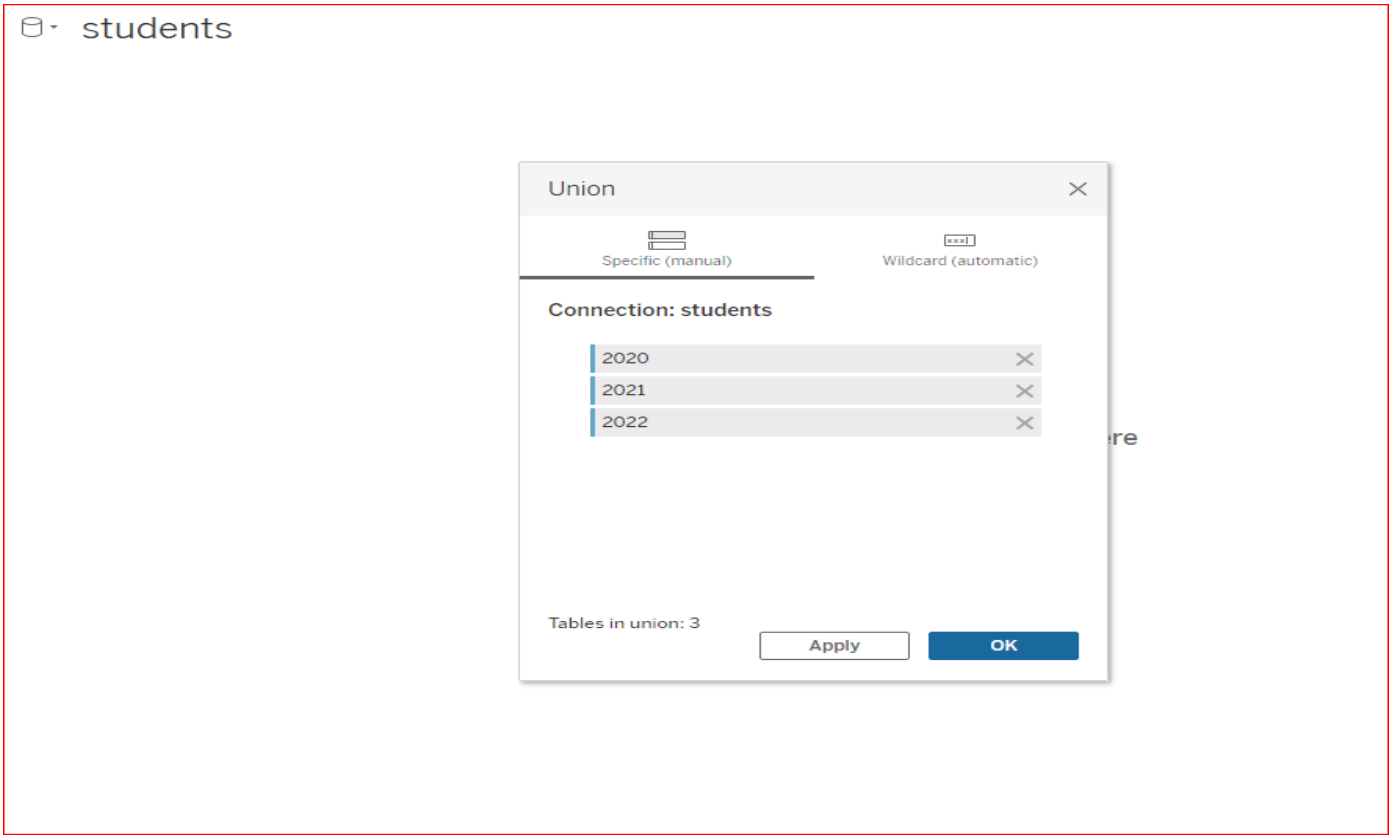
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Wildcard (automatic)
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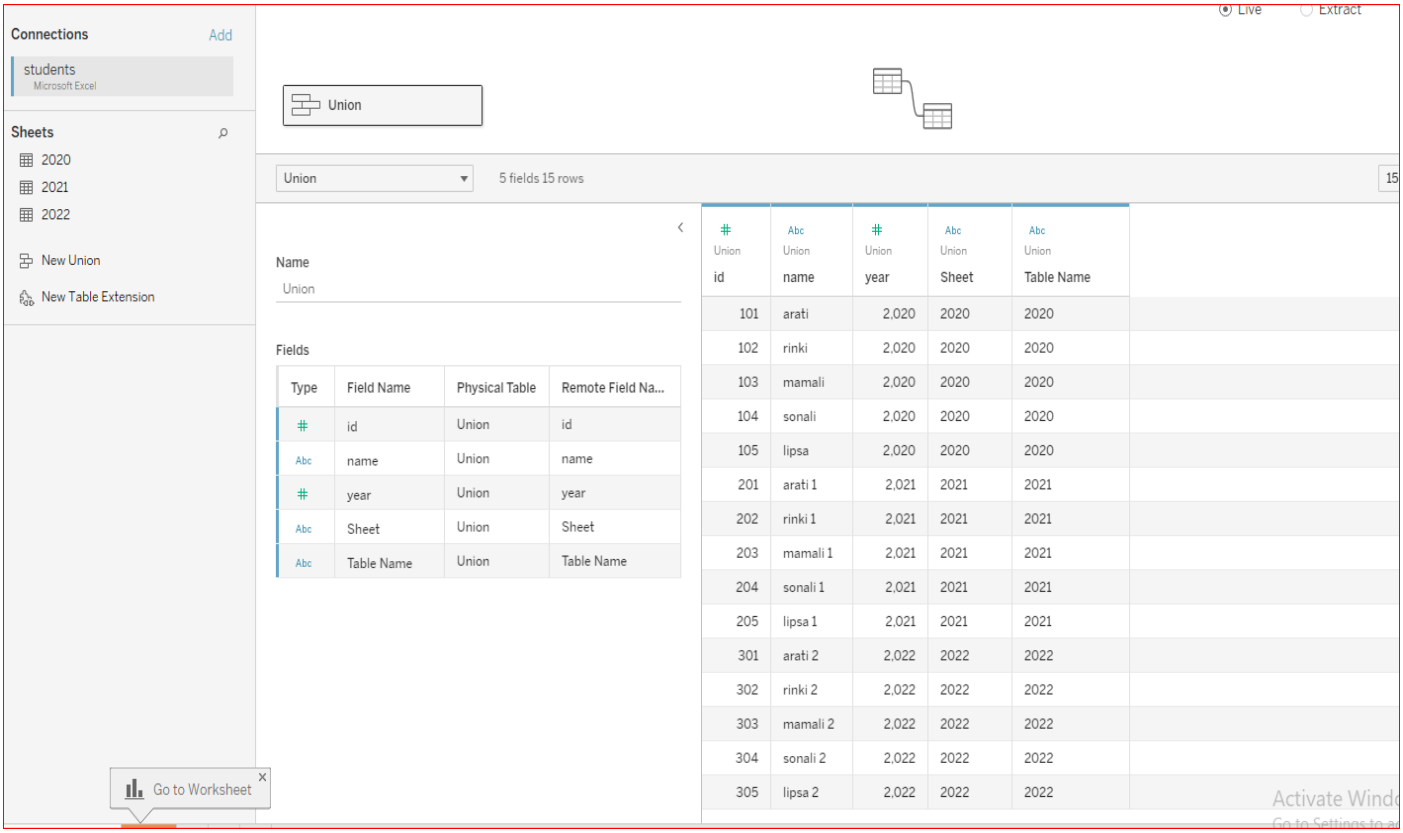
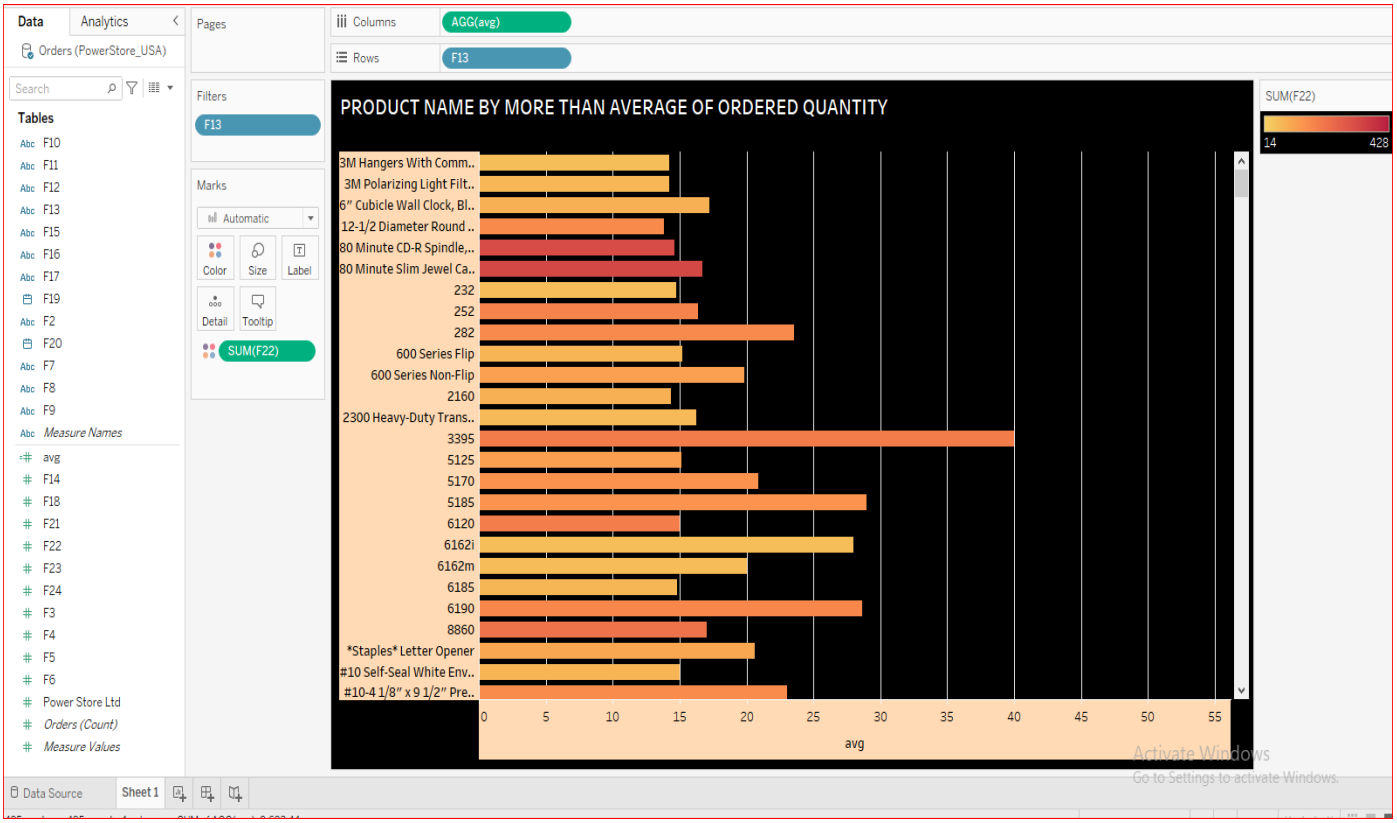
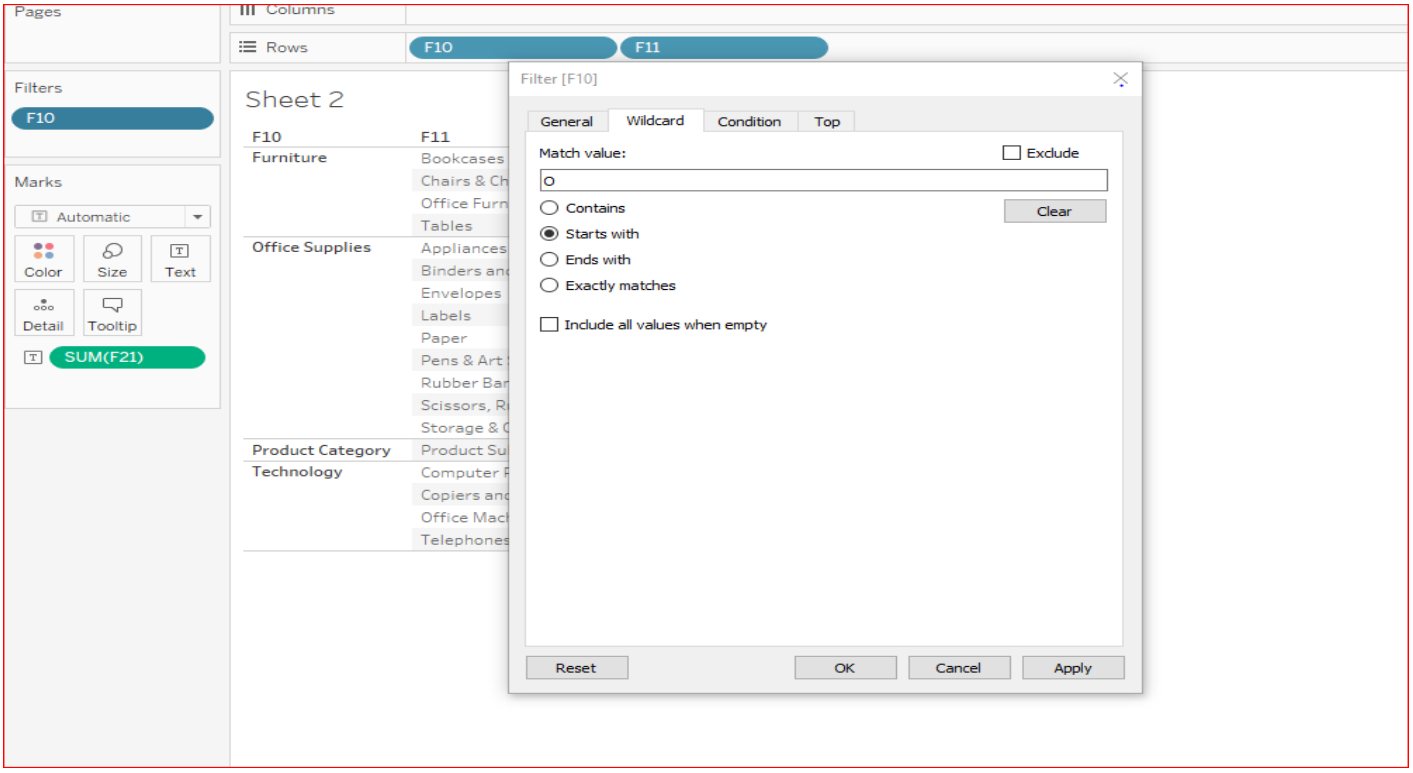
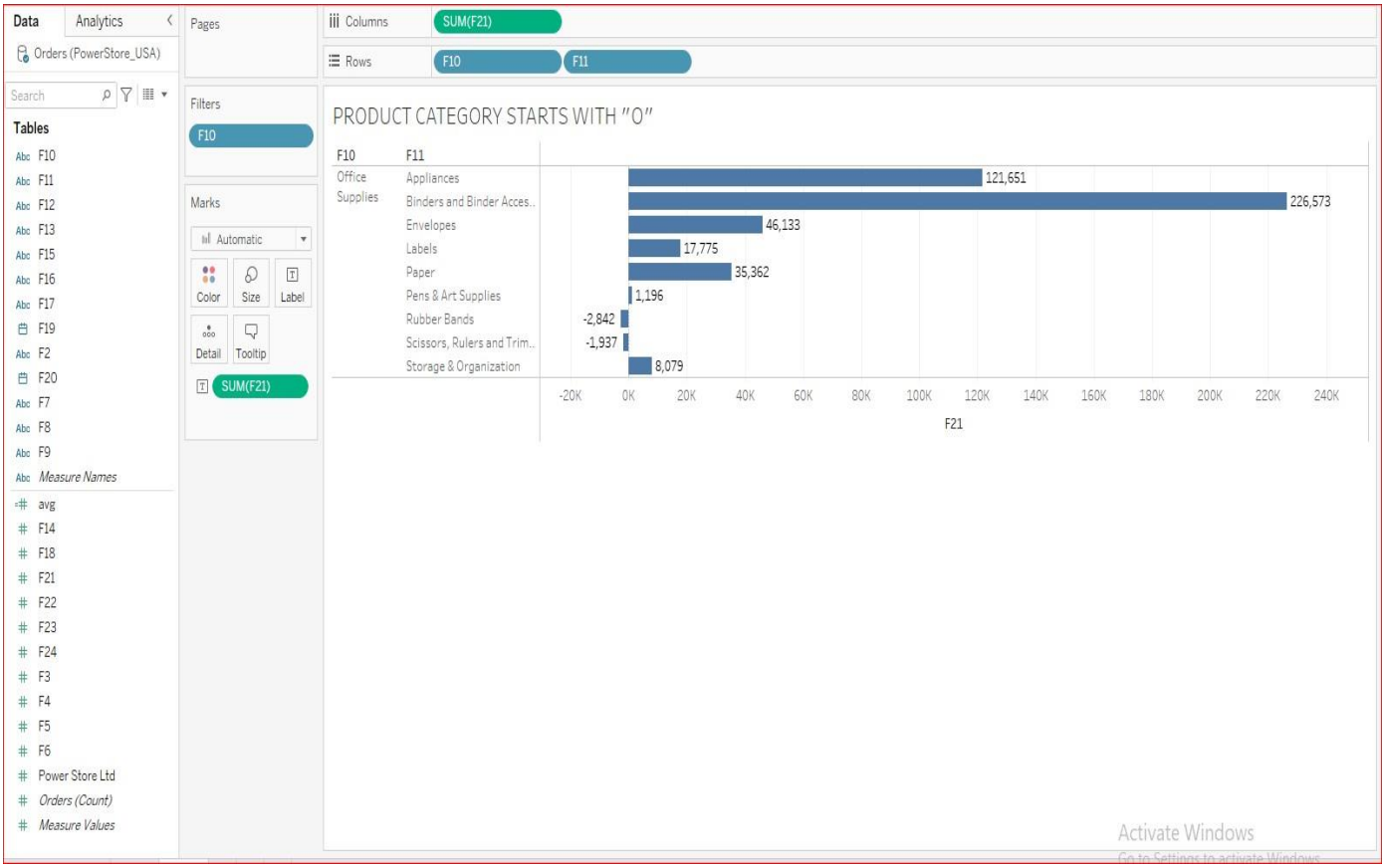
Apply
OK



4. Using the “PowerStore_USA" dataset, filter and display those products which satisfy the condition wherein the number of the quantity ordered is more than the total average quantity ordered.



5. **With respect to the “PowerStore_USA" dataset, apply a filter to your data such that only those values where the “Product-Category” starts with the letter “O” get displayed.**