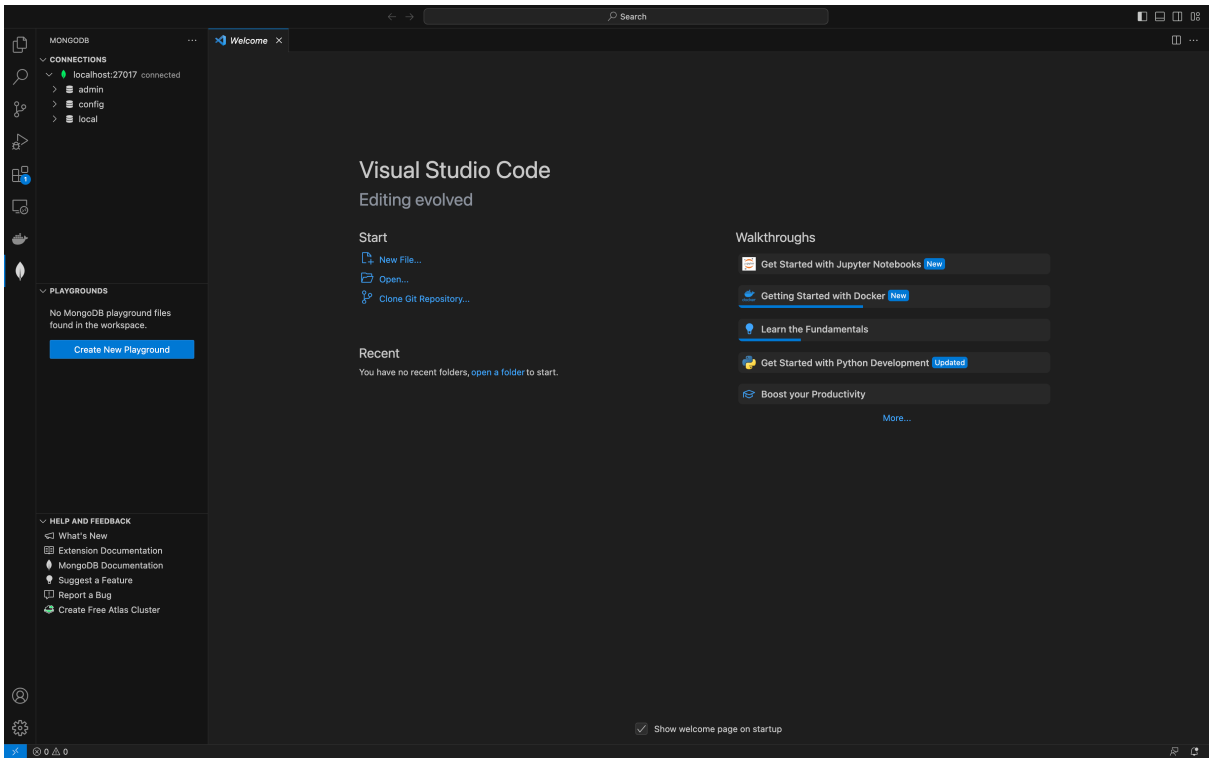
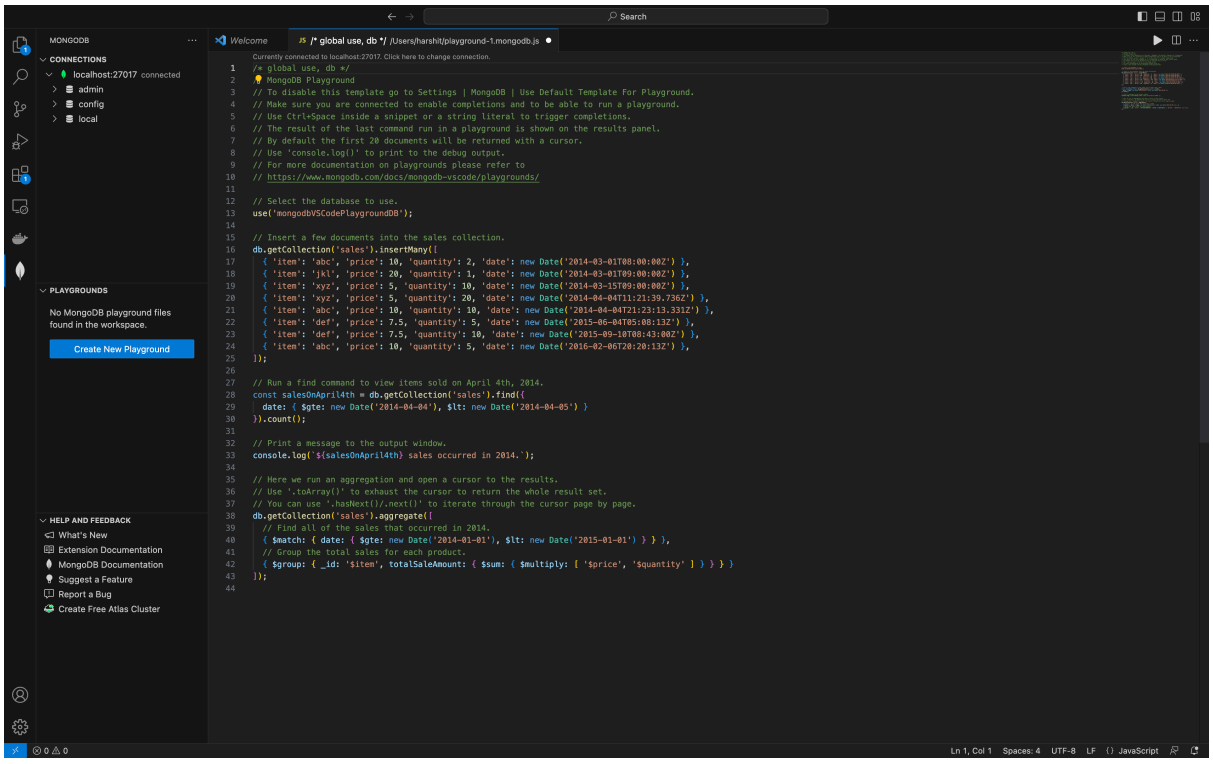
Part 1 : DB Systems

1. Open VS Code and connect to MONGODB

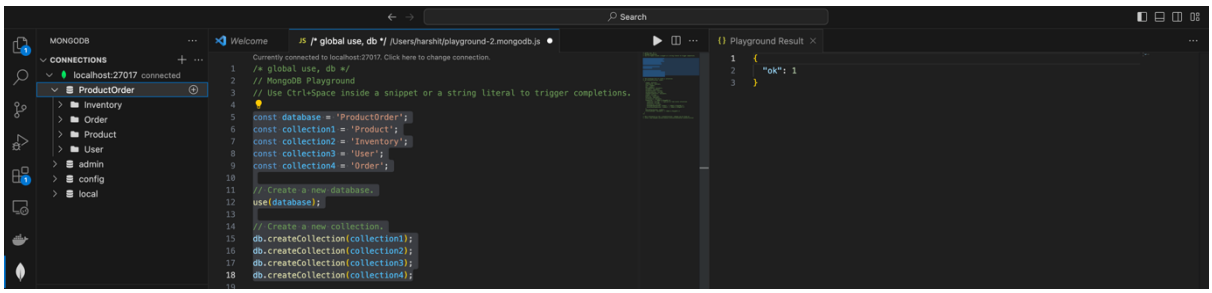
Following screenshot shows that MONGODB connection was successfully setup :



Sample playground screenshot:

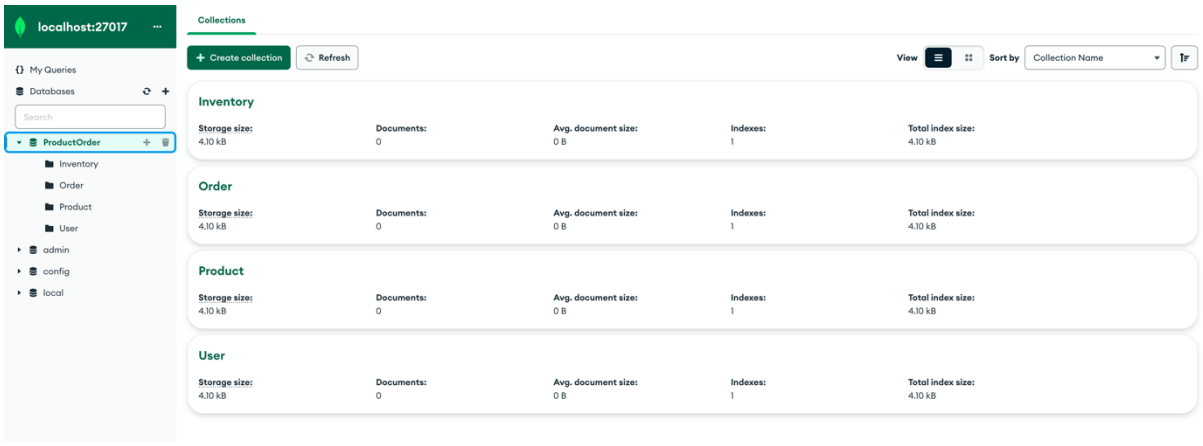


2. Create a database "ProductOrder" and create collections "Product", "Inventory", "User" and "Order" in it.



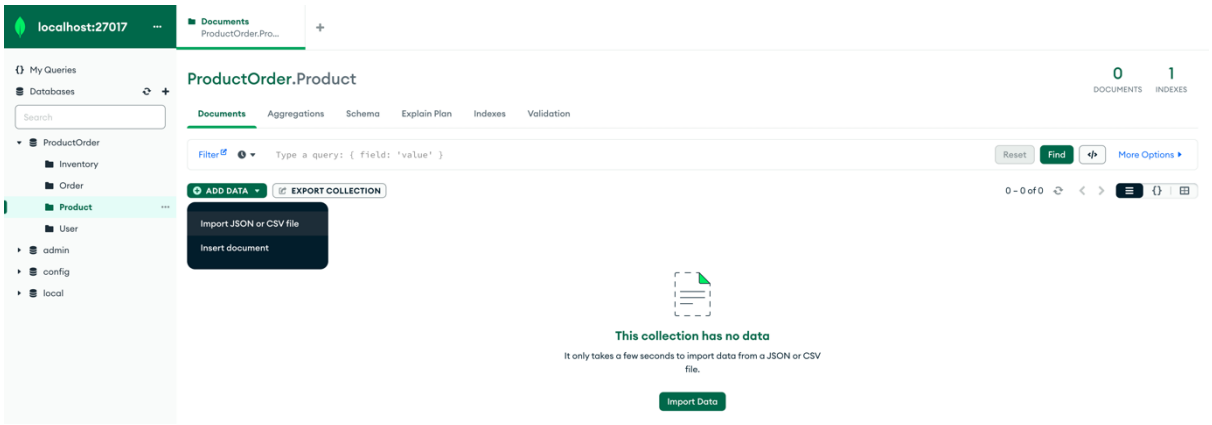
3. Open MongoDBCompass and navigate to the "ProductOrder" database.

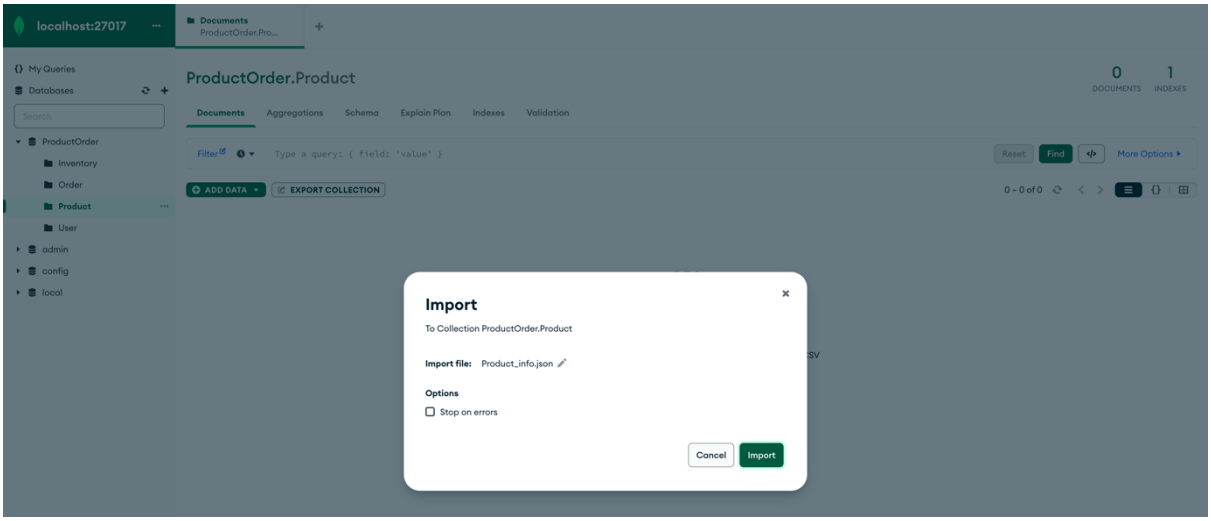
Before adding files:

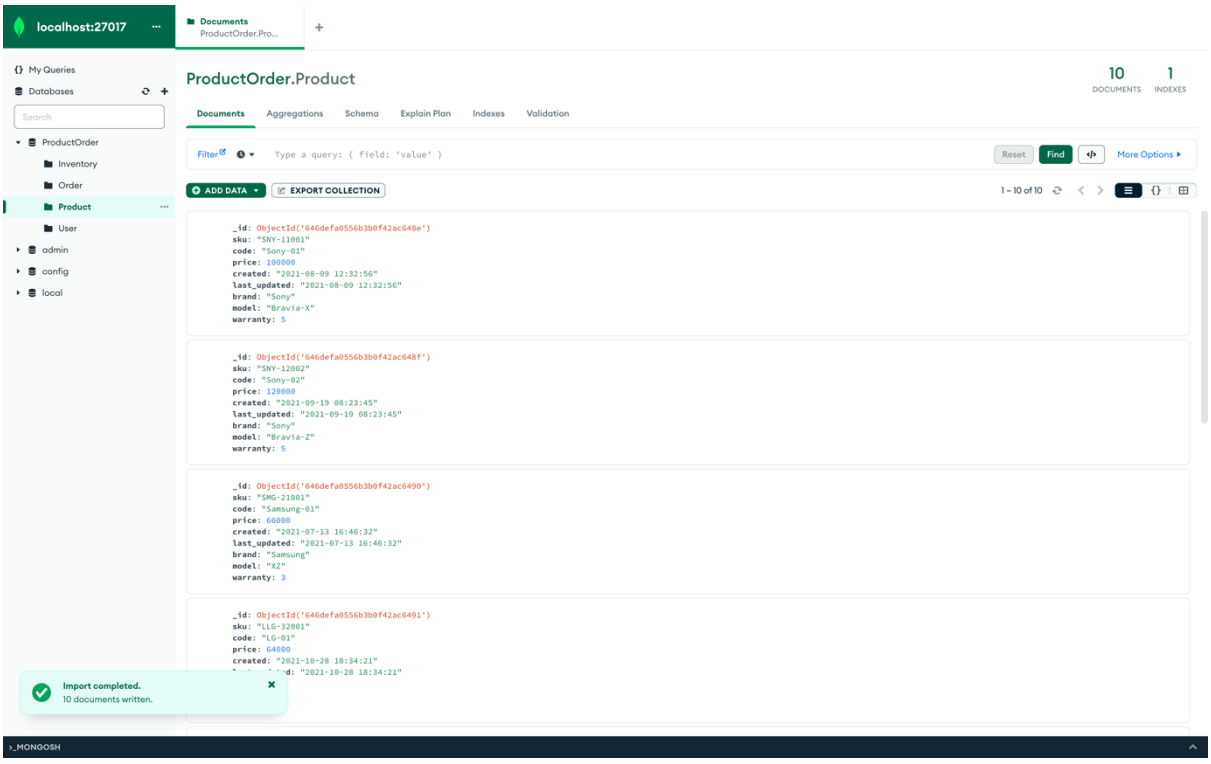


After adding the files:

3.1 Add "Product_info.json" file into the "Product" collection.

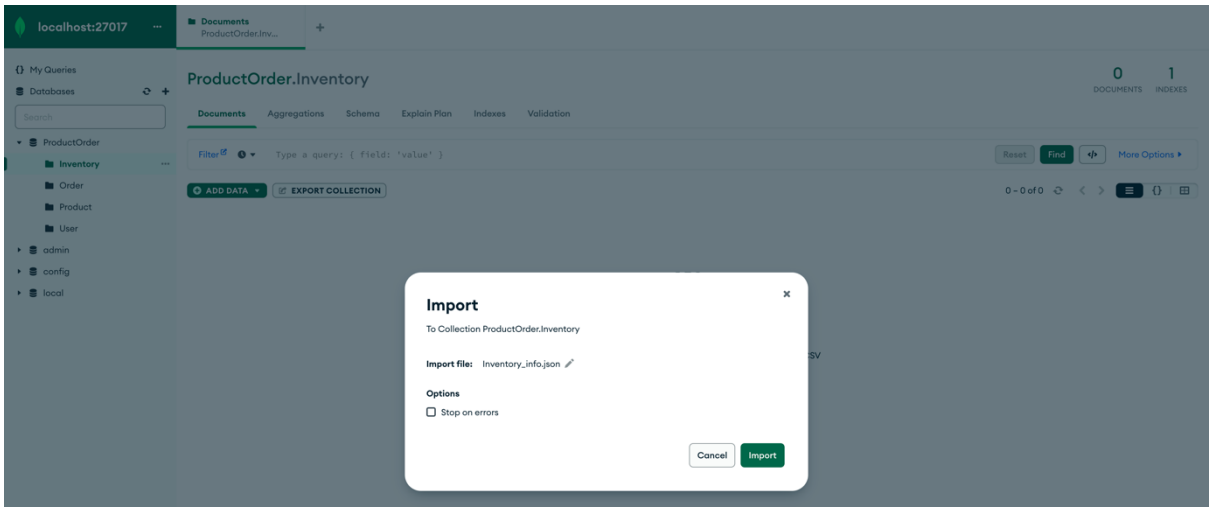


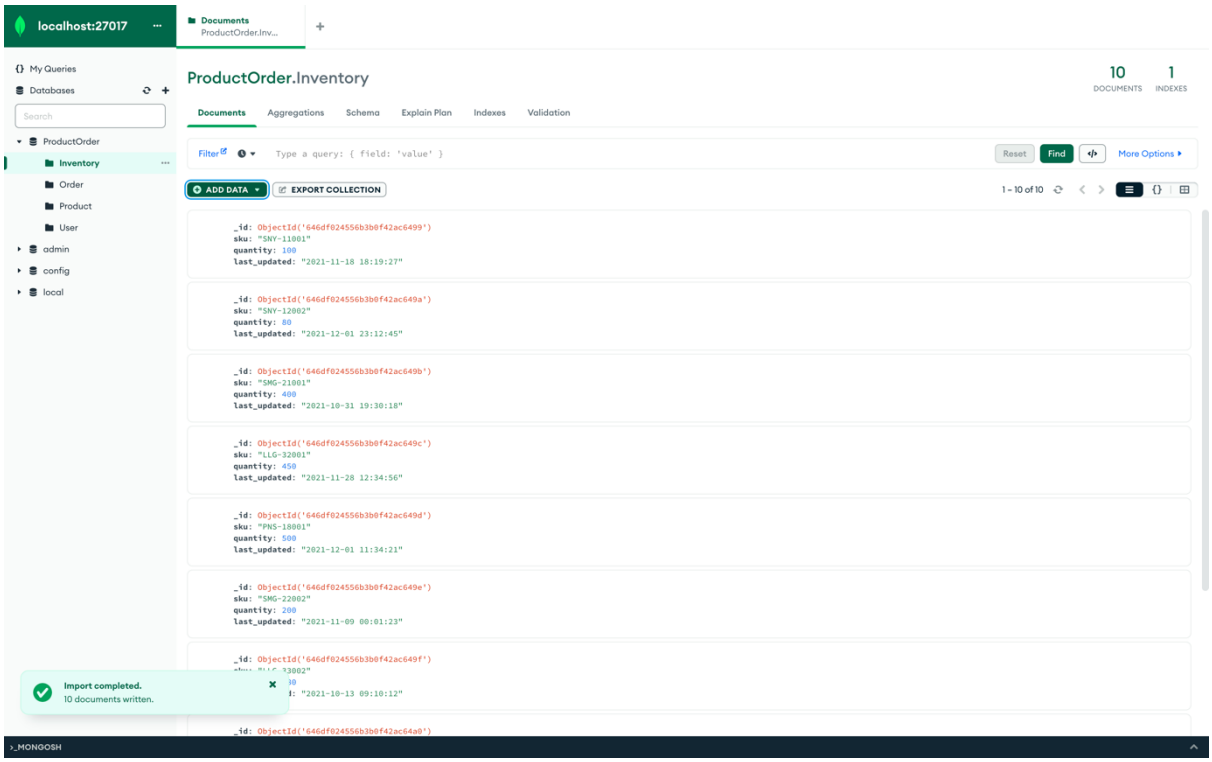




The above screenshot confirms that 10 documents were imported into the Product collection from the json provided.

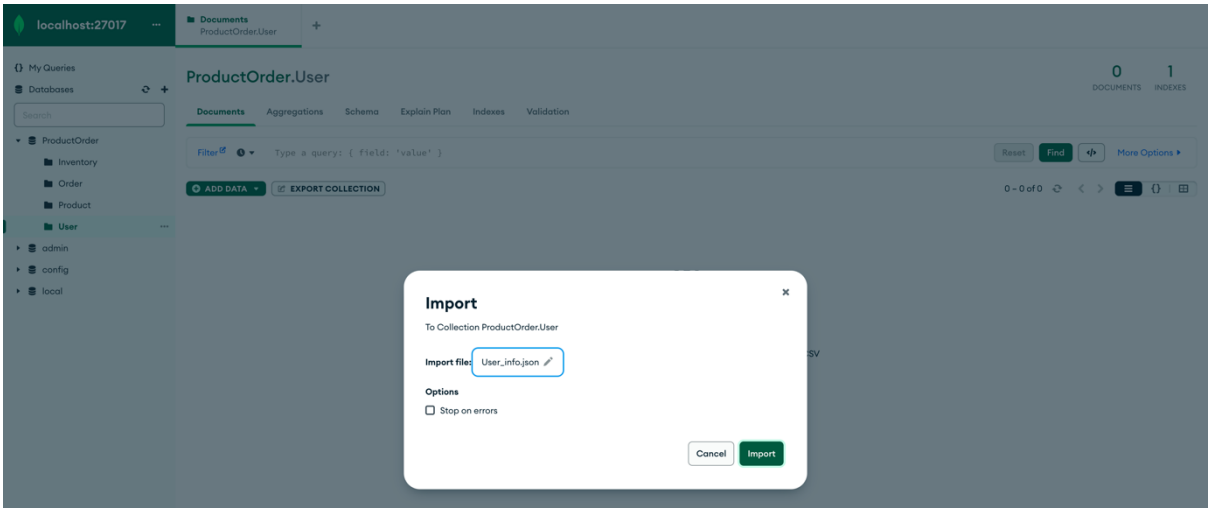
3.2 Add "Inventory_info.json" file into "Inventory" collection.

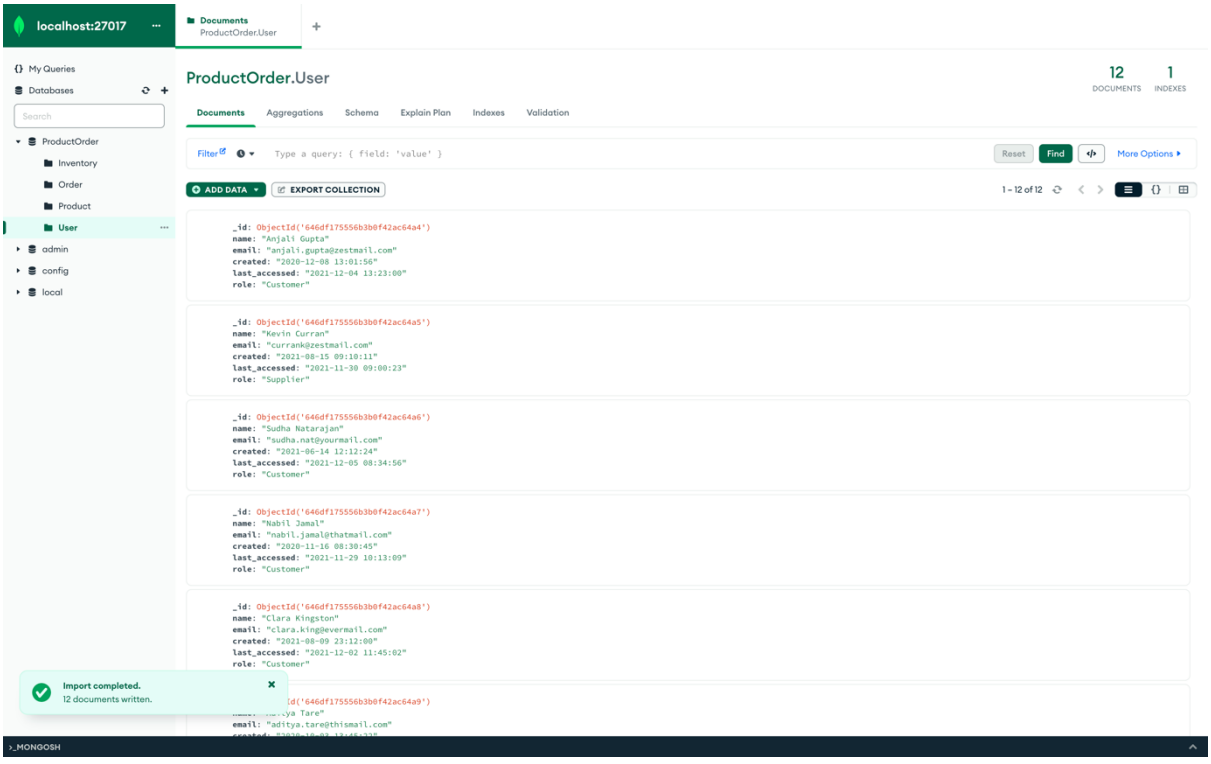




The above screenshot confirms that 10 documents were imported into the Inventory collection from the json provided.

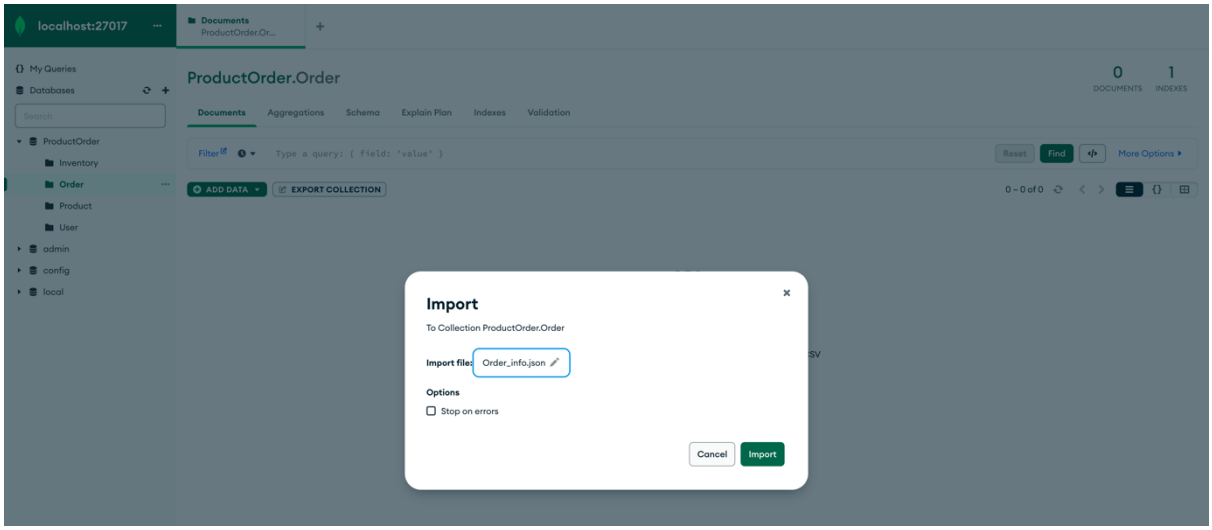
3.3 Add "User_info.json" file into the "User" collection.

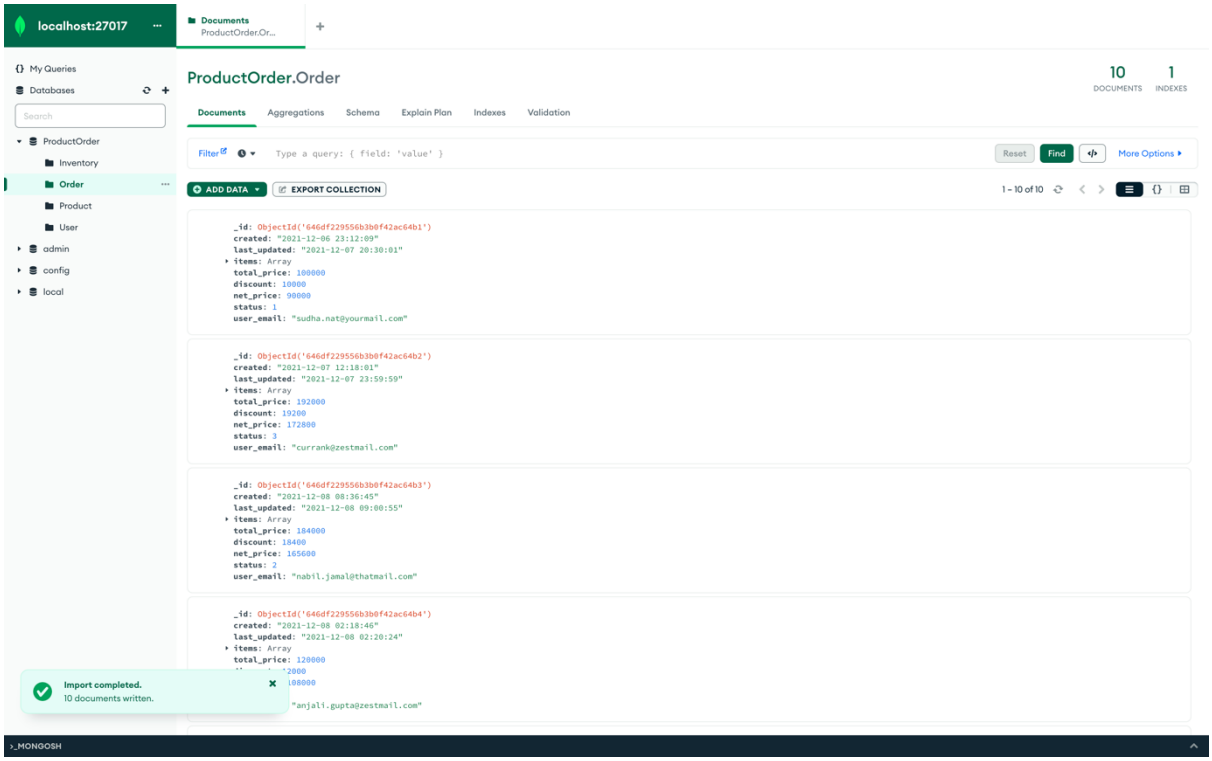




The above screenshot confirms that 12 documents were imported into the User collection from the json provided.

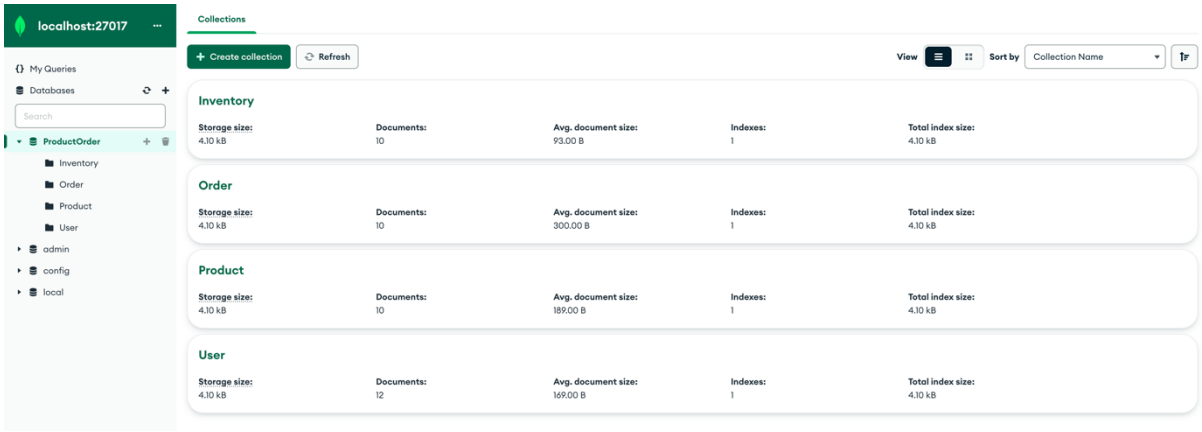
3.4 Add "Order_info.json" file into "Order" collection.





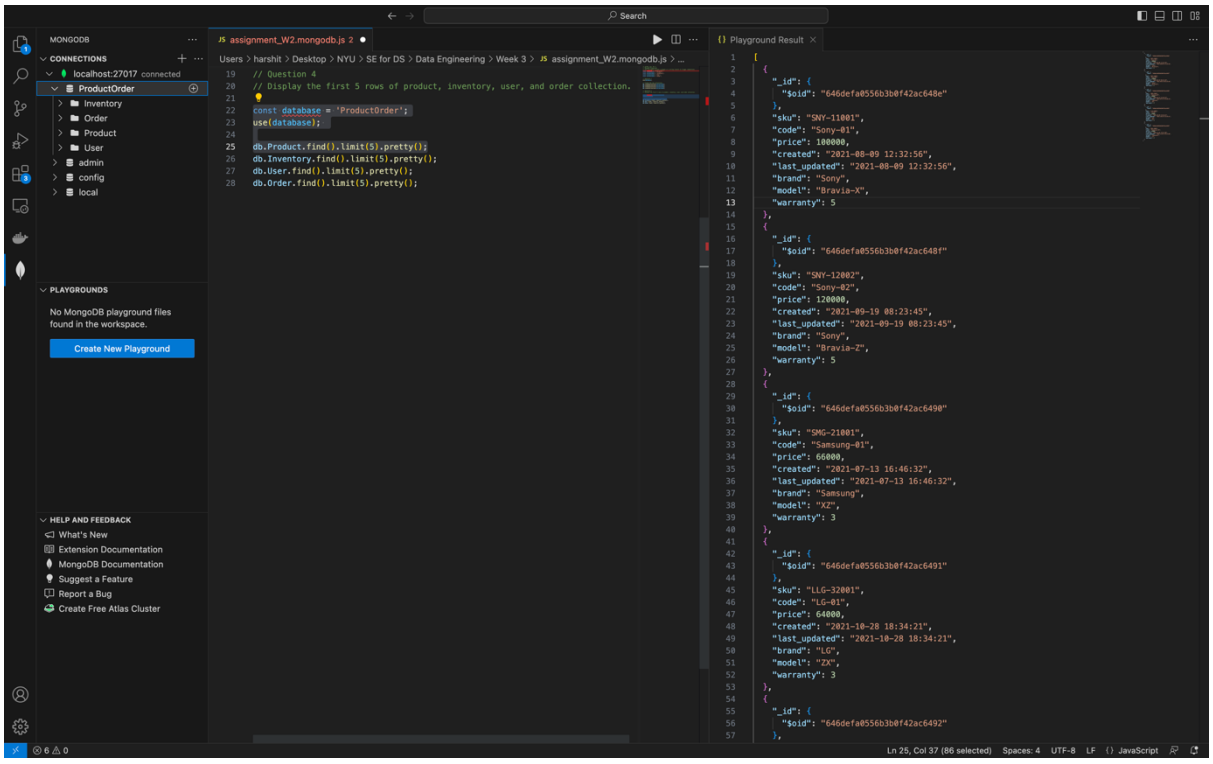
The above screenshot confirms that 10 documents were imported into the Order collection from the json provided.

After having imported all the json files, we have:

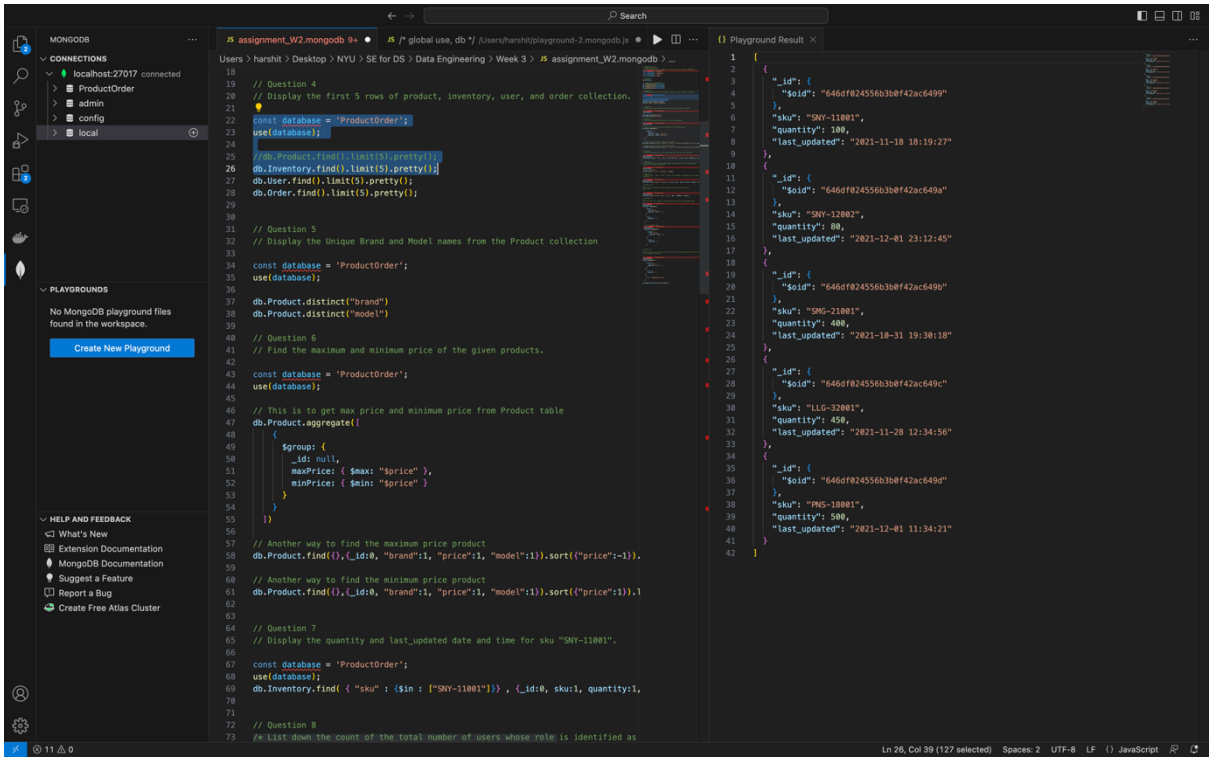


4. Display the first 5 rows of product, inventory, user, and order collection.

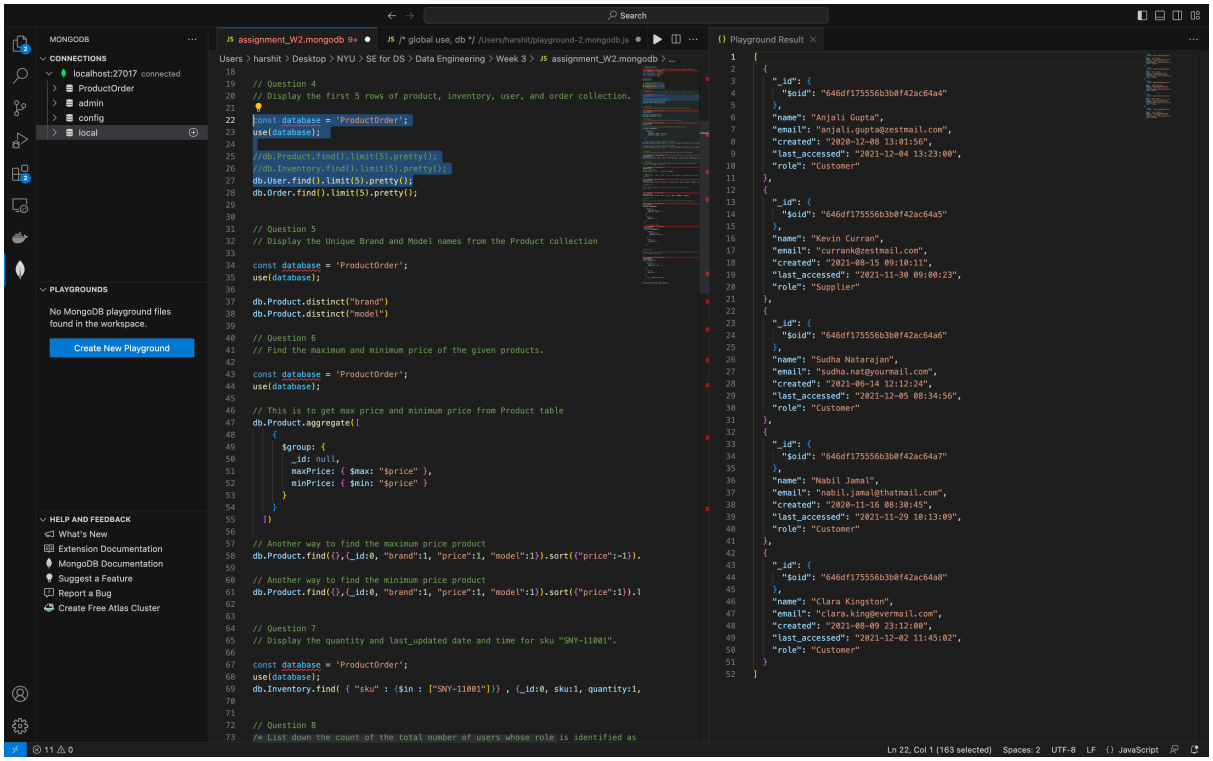
First 5 rows of Product:



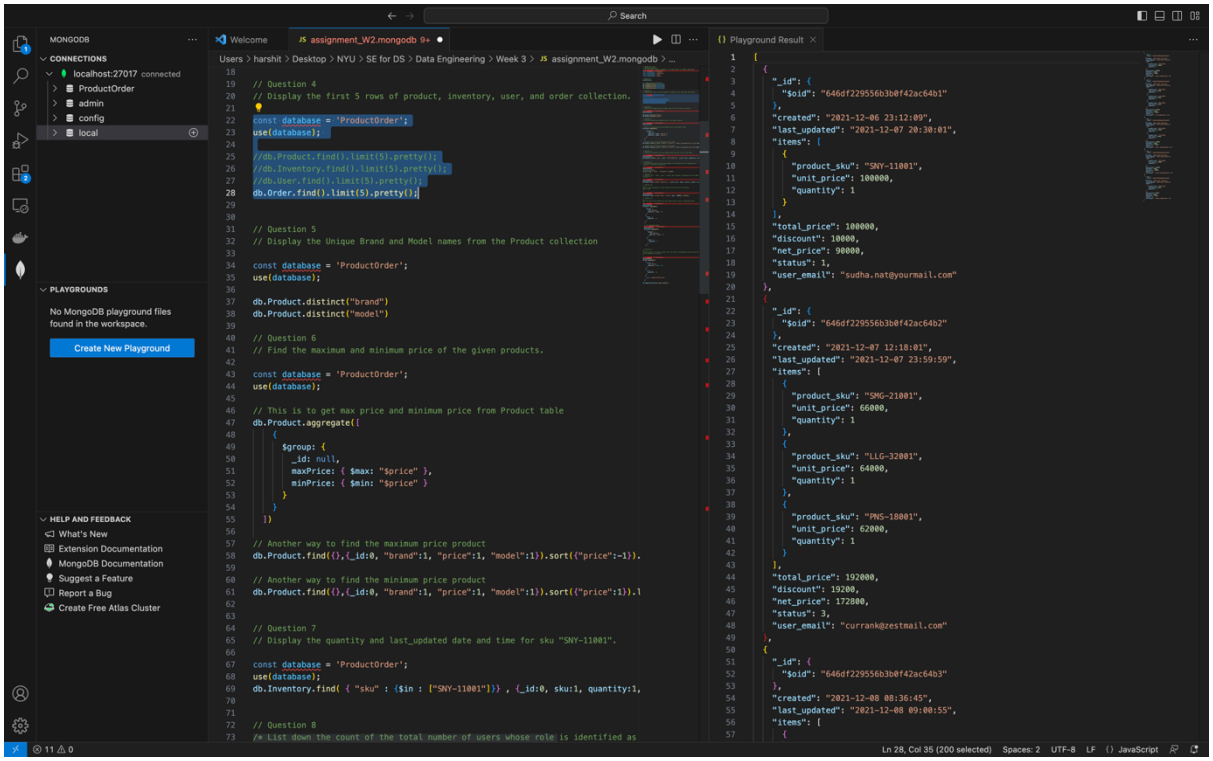
First 5 rows of Inventory:



First 5 rows of User:

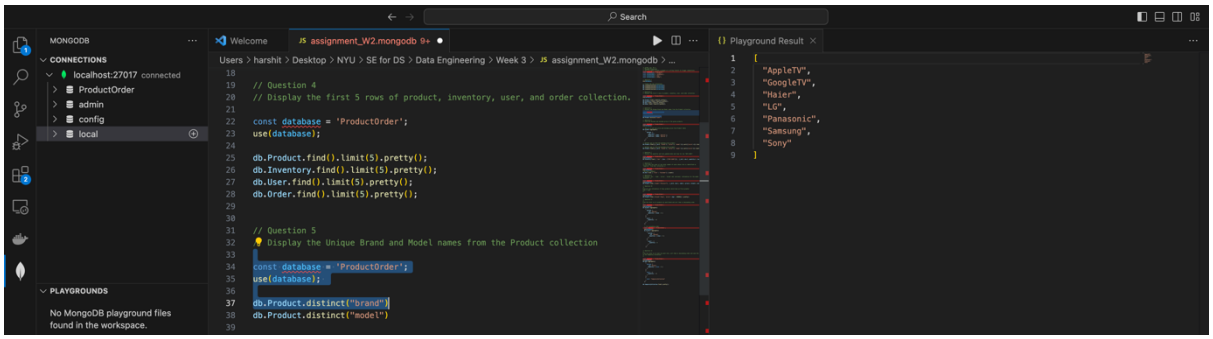


First 5 rows of Order:

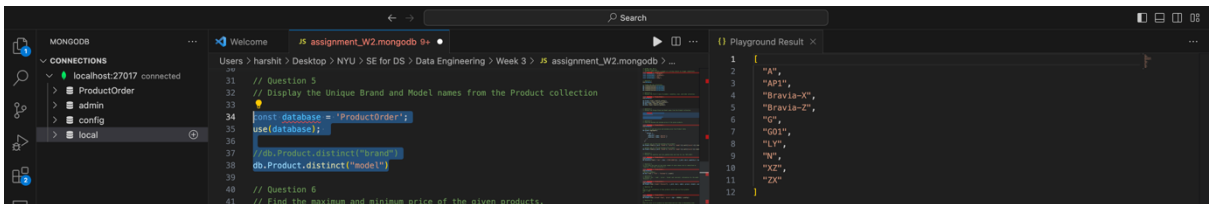


5. Display the Unique Brand and Model names from the Product collection.

Unique brand names:



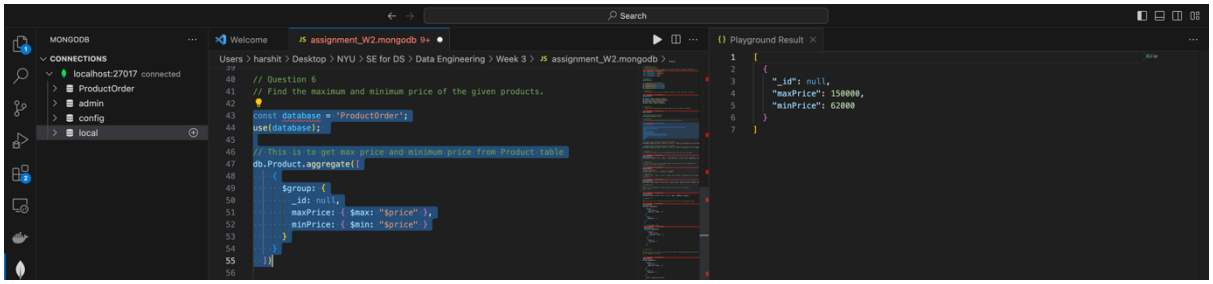
Unique model names:



6. Find the maximum and minimum price of the given products.

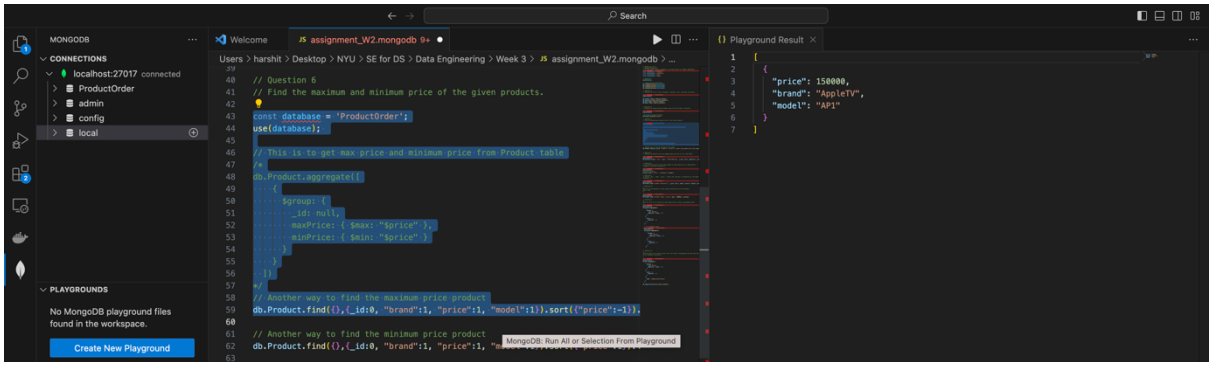
Approach 1:

In this approach, I have used the aggregate function to find out the maximum and minimum prices in the Product collection:

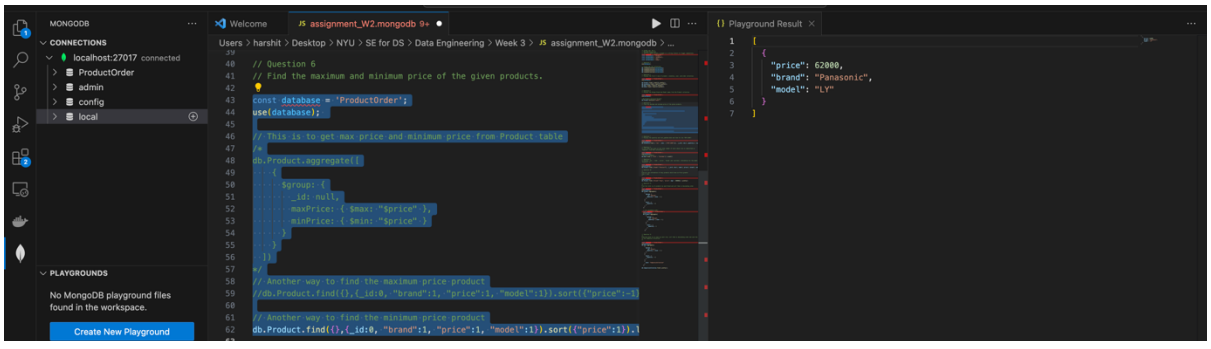


Approach 2:

In this approach, I have sorted the documents in Product collection as per price and then displayed the topmost document. If the order of sorting is descending, we get the maximum price product and if the order of sorting is ascending, we get the minimum price product. Sorting in descending order to get maximum price product:

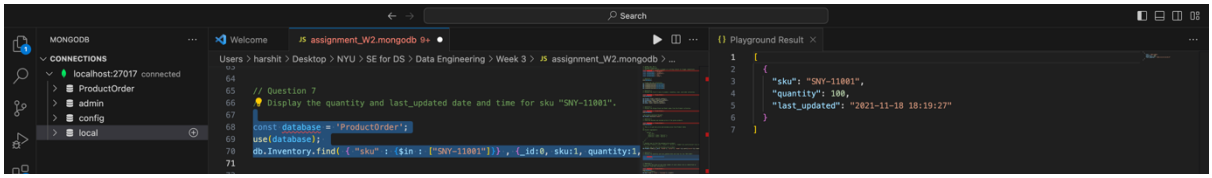


Sorting in ascending order to get minimum price product:

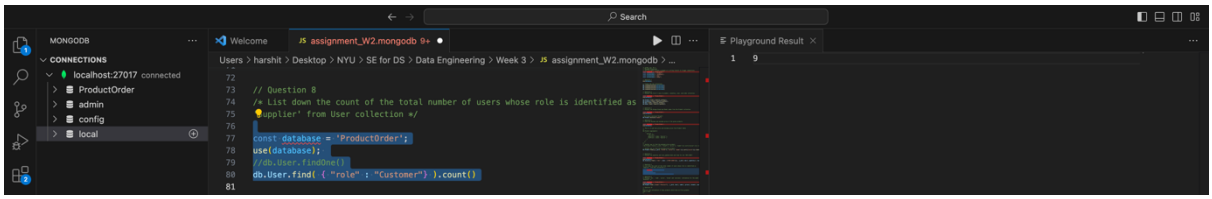


In aggregate function approach we are losing out on the other details of the corresponding document.

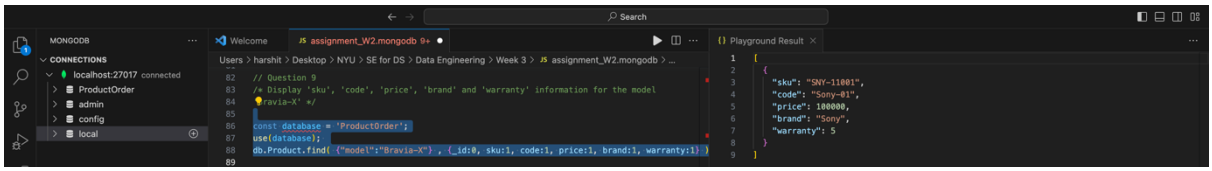
7. Display the quantity and last_updated date and time for sku "SNY-11001".



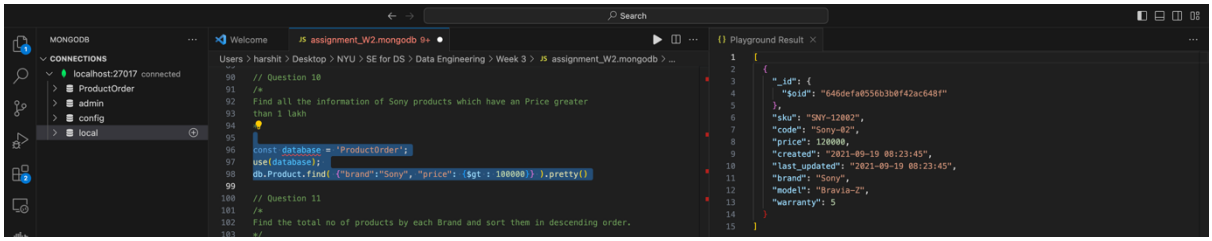
8. List down the count of the total number of users whose role is identified as 'Supplier' from User collection



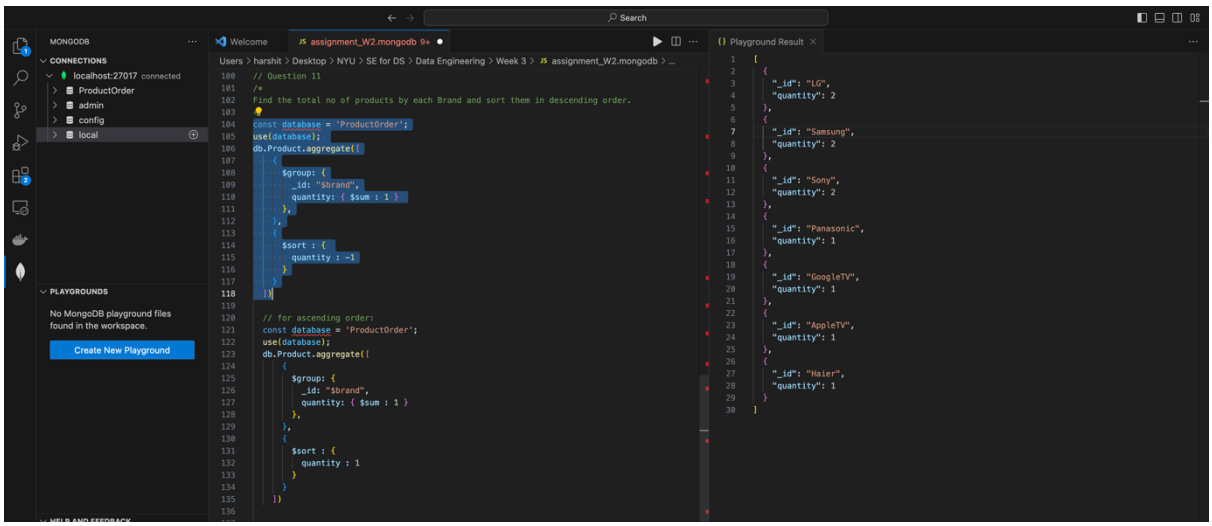
9. Display 'sku', 'code', 'price', 'brand' and 'warranty' information for the model 'Bravia-X' .



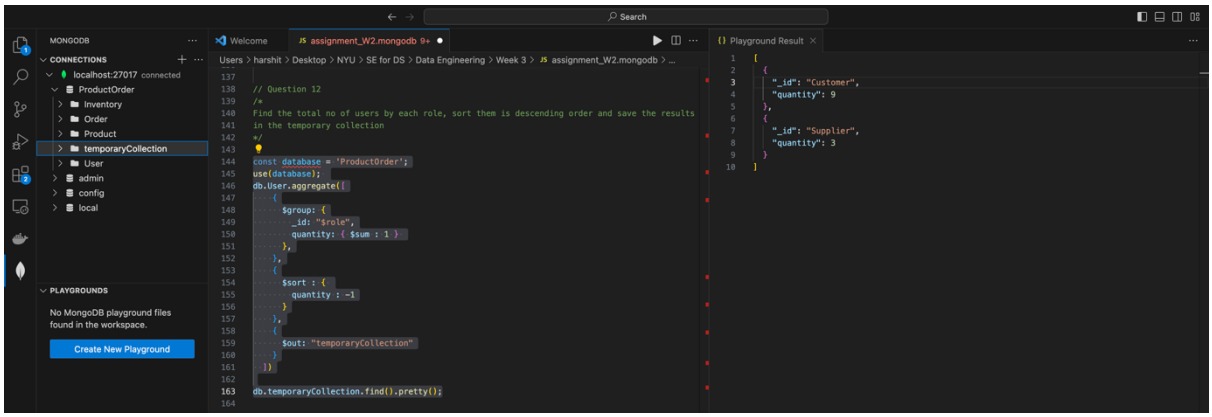
10. Find all the information of Sony products which have an Price greater than 1 lakh.



11. Find the total no of products by each Brand and sort them in descending order.



12. Find the total no of users by each role, sort them is descending order and save the results in the temporary collection.



Note: A new collection gets created by the name of “temporaryCollection” in the ProductOrder database and this can be seen on the left panel (temporaryCollection is highlighted).