Eugene Borts

Applied Database II

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Assignment 14B

Introduction

The purpose of this report is to demonstrate the most basic uses of MongoDB, a powerful NoSQL database program which uses JSON-like documents with schemata. This objective is accomplished by creating a database, a collection within that database, and adding multiple documents into that collection. Three queries are then used to retrieve data from the collection. The first query uses the in operator, the second query uses the and operator, and the third query uses the or operator.

Part One: MenuDB.RussianFood

The RussianFood collection in the MenuDB database consists of five fields: ID, Name, Description, MenuGroup, and Price.

RussianFood

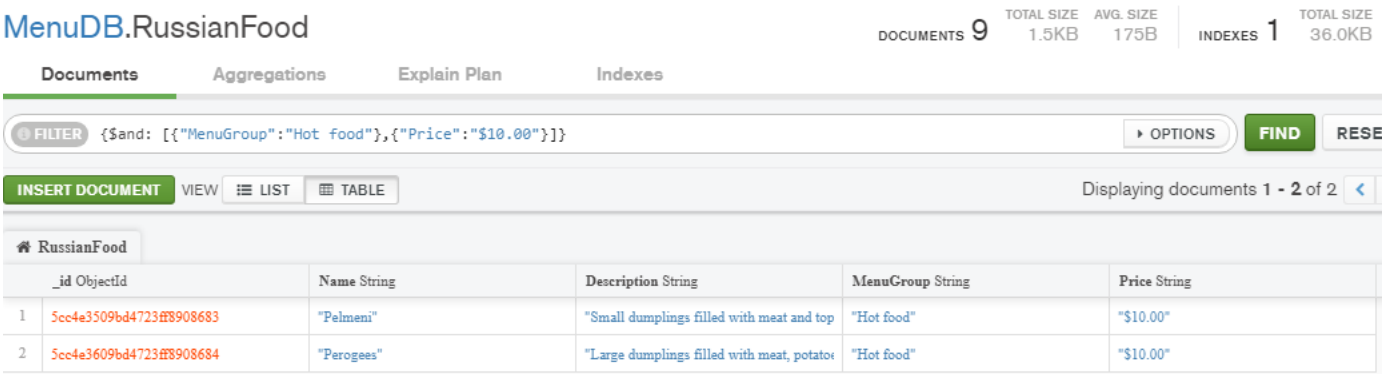
	_id ObjectId	Name String	Description String	MenuGroup String	Price String
1	5cc4e3509bd4723ff8908683	"Pelmeni"	"Small dumplings filled with meat and top	"Hot food"	"$10.00"
2	5cc4e3609bd4723ff8908684	"Perogees"	"Large dumplings filled with meat, potato	"Hot food"	"$10.00"
3	5cc4e3759bd4723ff8908685	"Blintzes"	"Thin crepes wrapped with a filling of mea	"Hot food"	"$11.50"
4	5cc4e6a29bd4723ff8908686	"Olivye"	"Salad with potatoes, meat, eggs, vegetabl	"Cold food."	"$8.00"
5	5cc4e73a9bd4723ff8908687	"Caviar"	"Fish eggs served with sliced bread and bu	"Cold food"	"$15.00"
6	5cc4e75e9bd4723ff8908688	"Kvass"	"A traditional fermented beverage similar	"Beverage"	"$2.50"
7	5cc4efe99bd4723ff8908689	"Vatrushka"	"The Eastern European version of a cheese	"Dessert"	"$4.00"
8	5cc4f0819bd4723ff890868a	"Vodka"	"Classic Russian liquor. Contains 40% alc	"Beverage"	"$3.00"
9	5cc4f0d69bd4723ff890868b	"Medovik"	"Deliciously sweet layer cake made from h	"Dessert"	"$5.00"

Part Two: Queries

In Operator

{"MenuGroup" : {$in : ["Dessert"]}}

Display rows that contain dessert.



And Operator

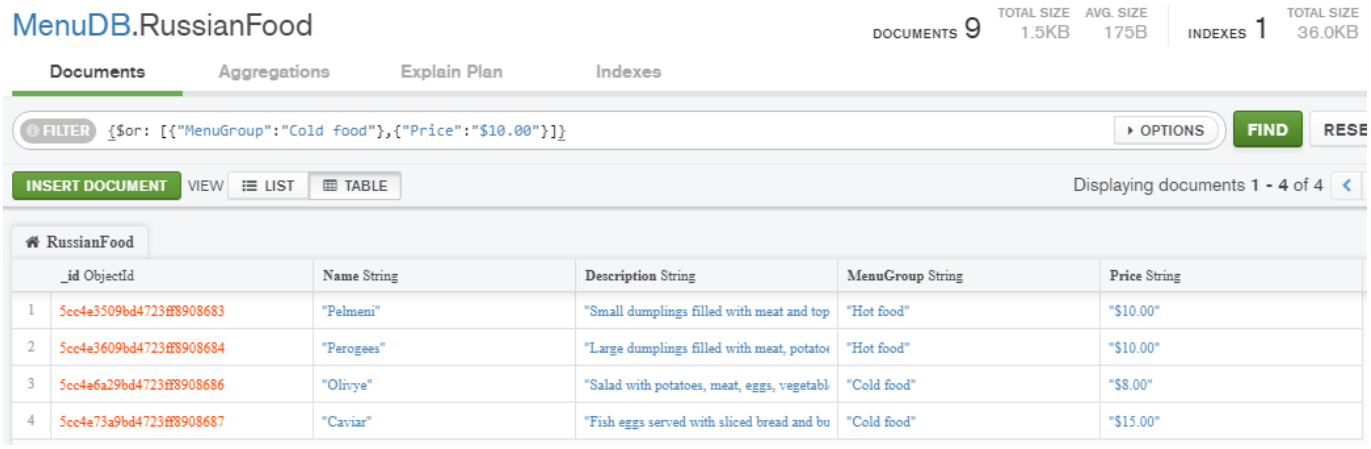
{$and: [{"MenuGroup":"Hot food"},{"Price":"$10.00"}]}

Display rows with hot food for the price of $10.00.

Or Operator

{$or: [{"MenuGroup":"Cold food"},{"Price":"$10.00"}]}

Display rows that have either cold food or a $10.00 item.



Conclusion

NoSQL is shown to be quite different from SQL, though similar at its core. MongoDB is faster and more scalable than SQL Server, but it does not support JOIN and Global transactions whereas SQL Server does. MongoDB also supports larger amounts of data and Agile practices, while SQL Server does not. In conclusion, NoSQL can be a powerful and effective database structure with numerous differences from database management systems that use SQL database structure, such as SQL Server.