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Lab Assignment 2

Aim: Execute any 10 queries on suitable sample MongoDB database to demonstrate various query criteria

Objective:

→ To study and execute MongoDB Indexes.

→ To study and execute Aggregate framework of MongoDB

Theory:

→ Explain different aggregation pipeline operator with example

1] Stage operator

- **$project:** Passes along documents with and specified fields to next stage in pipeline
- **$match:** Filters documents based on materials of specified conditions to next pipeline stage
- **$group:** groups document by some specific expression of groups documents for distinct grouping id fields contains distinct group by key.

2] Set operators:

- **$set equals:** compares between two/more areas and return true if some distinct element the false
- **$set subtraction:** $set Union $set difference some as set operations
- **$set subset:** returns true when first array is subset of second or even if first array equals second

→ Explain type of indices in MongoDB

1) Single field: use to create index on the single field of document

2) Compound Index: MongoDB supports userdefined index on multiple fields

3) Multikey Index: MongoDB uses the multikey index to index the values sorted in array.

4) Geospatial index: supports 2D & 2D sphere index 2.D uses planer geomatery where as other uses spherical geometery

5) Text Index: supports searching of string content in collection

Input: Sample Collection

Output: Execution of all commands

Platform: Windows.

Conclusion: Successfully performed the experiment

FAQS

1 Which pipeline operator is similar to where and having in MongoDB

where ~ $where
having ~ $group < criteria >
        $ then $match < criteria >

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2 How to know which indicies are defined over a collection?

Use : db.collection.getindexes() method to know index defined

3 what is the application of $unwind in MongoDB?

Used to deconstruct an array field in a document and create seperate output document for each items in array.