



The Idea is To Generate MongoDb Queries With User Text Input

AI ISN'T AI

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IDEA & IMPLEMENTATION

user document

```
{  
  _id: <ObjectId1>,  
  username: "123xyz"  
}
```

contact document

```
{  
  _id: <ObjectId2>,  
  user_id: <ObjectId1>,  
  phone: "123-456-7890",  
  email: "xyz@example.com"  
}
```

access document

```
{  
  _id: <ObjectId3>,  
  user_id: <ObjectId1>,  
  level: 5,  
  group: "dev"  
}
```

mongoDB

WHAT IS THE **IDEA**?

MongoDB

MongoDB, the most popular open-source document-oriented database is a NoSQL type of database.

NoSQL database stands for Non-Structured Query Database. MongoDB stores the data in the form of the structure(field:value pair) rather than tabular form. It stores data in BSON (Binary JSON) format just like JSON format.

NoSQL systems are also sometimes called **Not only SQL** to emphasize that they may support SQL-like query languages or sit alongside SQL databases in polyglot-persistent architectures.

```
Collection  
db.orders.mapReduce(  
  map → function() { emit( this.cust_id, this.amount ); },  
  reduce → function(key, values) { return Array.sum( values ) },  
  query → {},  
  output → { query: { status: "A" }, out: "order_totals" }  
)
```



A simple example of a MongoDB database collection.

```
{  
    "_id" : ObjectId("6009585d35cce6b7b8f087f1"),  
    "title" : "Math",  
    "author" : "Aditya",  
    "level" : "basic",  
    "length" : 230,  
    "example" : 11  
}
```

The `find()` method displays the database collection in Non-Structured form(`{<Key>:<value>}`) including auto-created `<key>" id "` by MongoDB and collection data inserted by user or admin.

`db.collection_name.find()`

<https://www.geeksforgeeks.org/what-is-a-mongodb-query/>

MongoDB Query is a way to get the data from the MongoDB database. MongoDB queries provide the simplicity in process of fetching data from the database, it's similar to SQL queries in SQL Database language.

Example:

```
db.article.find()
```

This method is used to display all the documents present in the article collection.

```
> db.article.find()  
{ "_id" : ObjectId("6009585d35cce6b7b8f087f1"), "title" : "Math", "author" : "Aditya", "level" : "basic", "length" : 230, "example" : 11 }  
{ "_id" : ObjectId("60095b8a3fc110f90873ce29"), "title" : "Array", "author" : "Aditya", "level" : "basic", "length" : 200, "example" : 5 }  
{ "_id" : ObjectId("60095b8a3fc110f90873ce2a"), "title" : "Stack", "author" : "Rakesh", "level" : "easy", "length" : 400, "example" : 10 }  
{ "_id" : ObjectId("60095b8a3fc110f90873ce2b"), "title" : "Queue", "author" : "Rakesh", "level" : "medium", "length" : 350, "example" : 2 }  
{ "_id" : ObjectId("60095b8a3fc110f90873ce2c"), "title" : "Tree", "author" : "devil", "level" : "high", "length" : 1000, "example" : 10 }  
{ "_id" : ObjectId("60095b8a3fc110f90873ce2d"), "title" : "Graph", "author" : "Aditya", "level" : "high", "length" : 1500, "example" : 15 }  
{ "_id" : ObjectId("60095b8d3fc110f90873ce2e"), "title" : "Segment Tree", "author" : "devil", "level" : "very high", "length" : 500, "example" : 20 }  
{ "_id" : ObjectId("60095fd4e5a7731b2a55a922"), "title" : "Trie", "author" : "Rakesh", "length" : 500, "example" : 20, "time" : 50 }
```



An **application programming interface (API)** is a way for two or more computer programs to communicate with each other. It is a type of software interface, offering a service to other pieces of software. A document or standard that describes how to build or use such a connection or interface is called an *API specification*. A computer system that meets this standard is said to *implement* or *expose* an API. The term API may refer either to the specification or to the implementation.

In contrast to a user interface, which connects a computer to a person, an application programming interface connects computers or pieces of software to each other. It is not intended to be used directly by a person (the end user) other than a computer programmer who is incorporating it into the software. An API is often made up of different parts which act as tools or services that are available to the programmer. A program or a programmer that uses one of these parts is said to *call* that portion of the API. The calls that make up the API are also known as subroutines (or functions), methods, requests, or endpoints. An API specification *defines* these calls, meaning that it explains how to use or implement them.

Software is a set of computer programs.

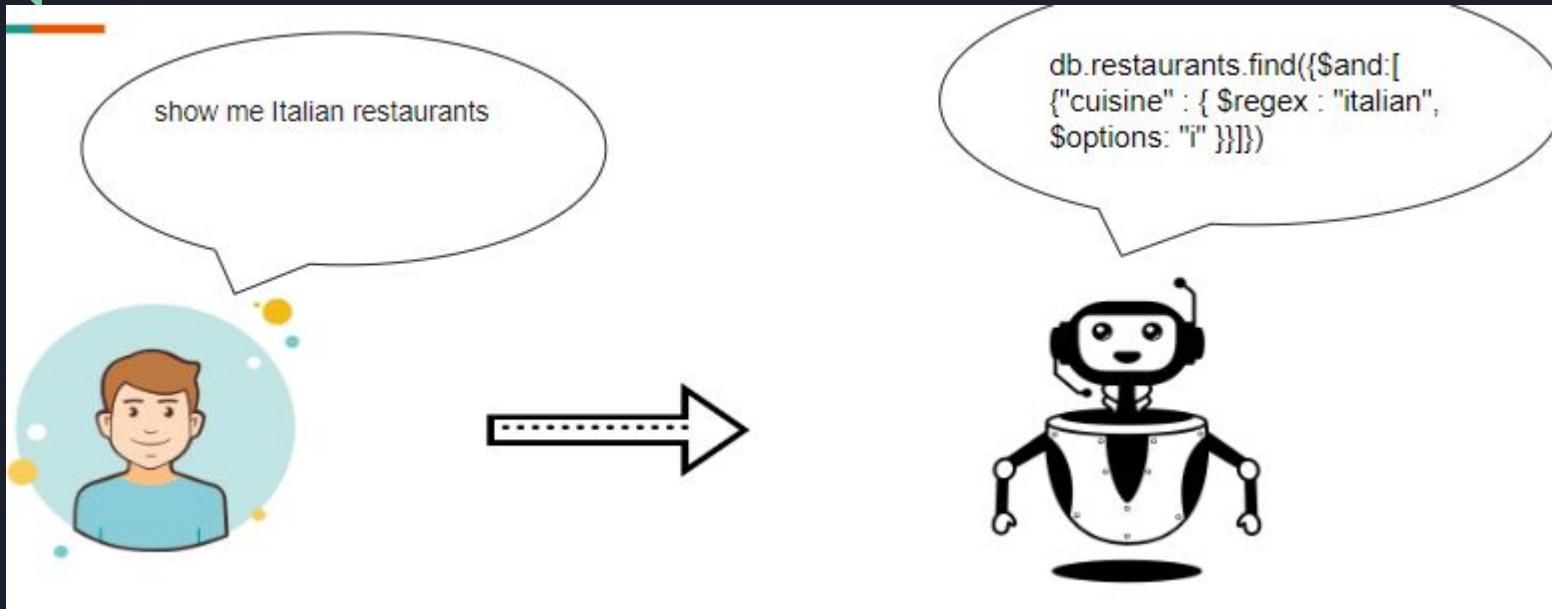


Google Collaboratory & github

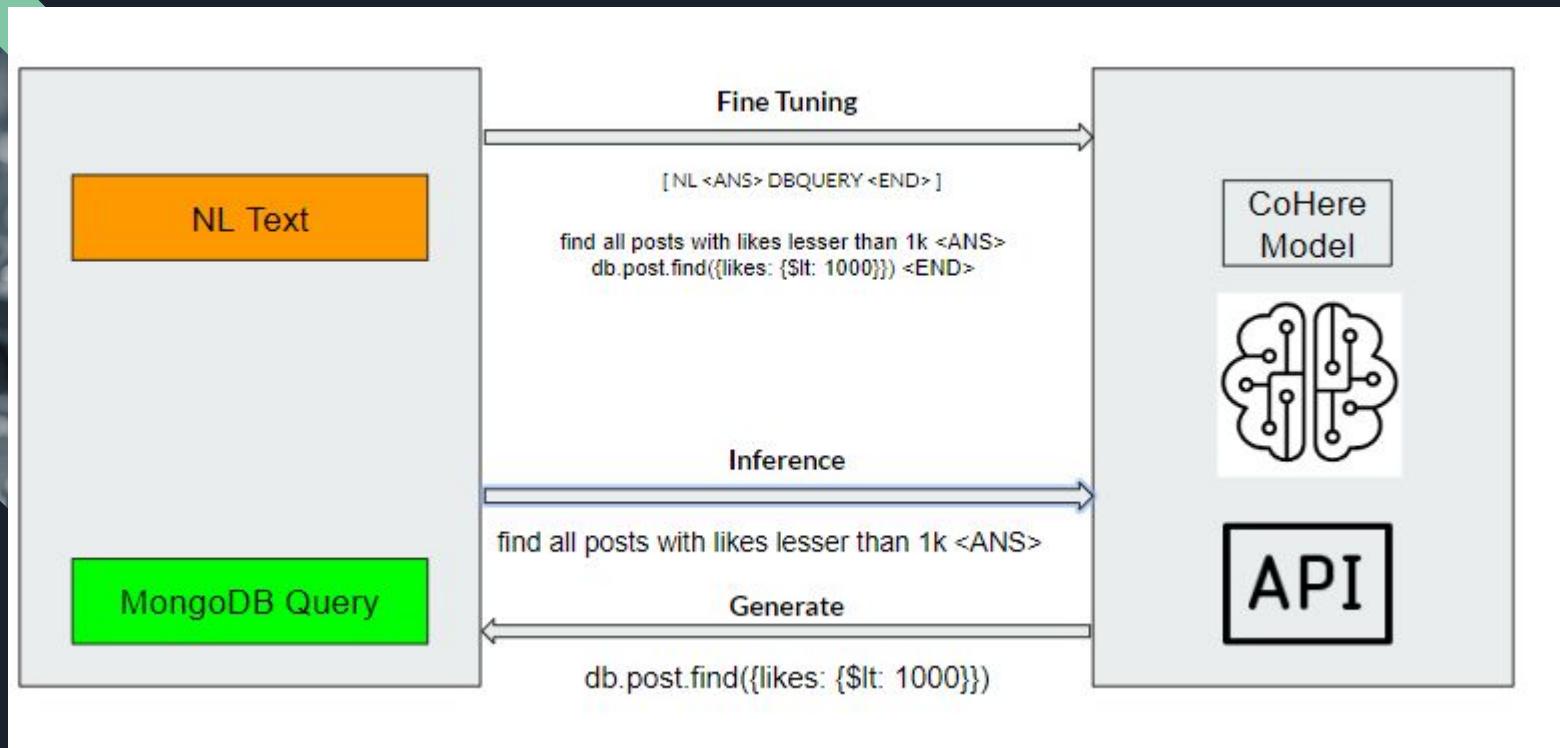
https://github.com/Deanna1511/Project_MongoDb

https://colab.research.google.com/drive/1NcIKvqAv_jqWNePgfboHQFzTpOEsPuss#scrollTo=yD1F7QeUDOCm

WHAT'S THE IDEA:



PROTOTYPE



DEMO

Generating MongoDB Queries

User Query

show me a good Italian restaurant

Generate query

```
db.restaurants.find({$and:[{"cuisine": {"$regex": "italian", "options": "i"}, {"grades.score": {$gt: 70}}]}))
```

Run on Mongo

Made with Streamlit

Thank you!

