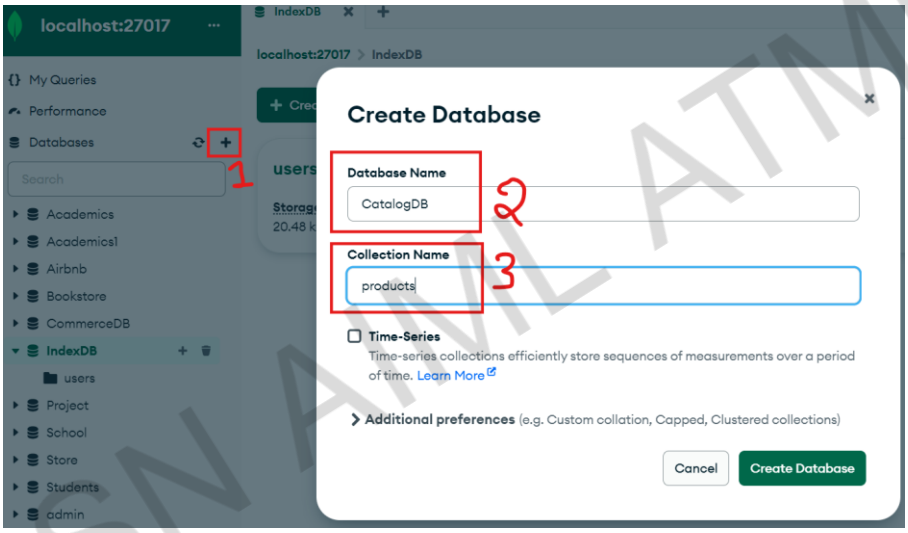
Program 9

9. a. Develop a query to demonstrate Text search using catalog data collection for a given word

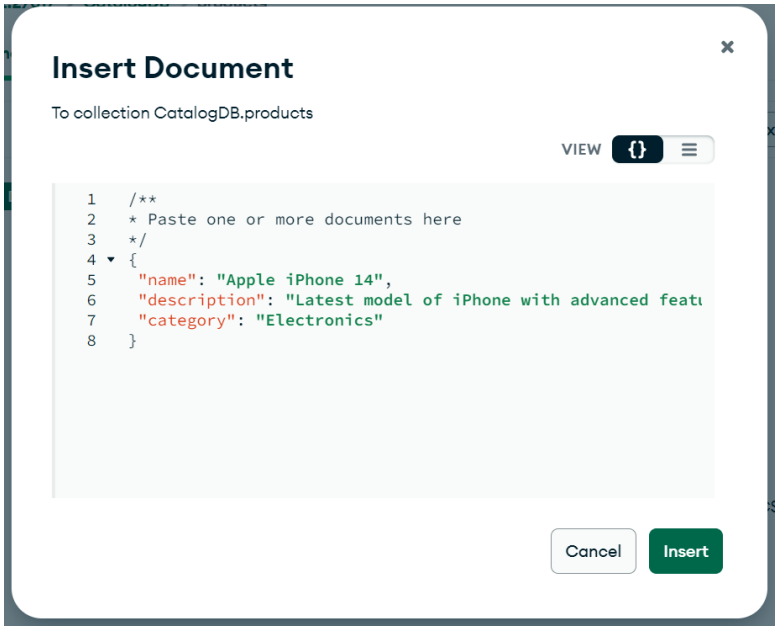
b. Develop queries to illustrate excluding documents with certain words and phrases.

Create a database **CatalogDB** and collection **products** in Mongo IDE.



Add the following documents in the **collection products** in MongoDB IDE.

```
{
 "name": "Apple iPhone 14",
 "description": "Latest model of iPhone with advanced features",
 "category": "Electronics"
}
```



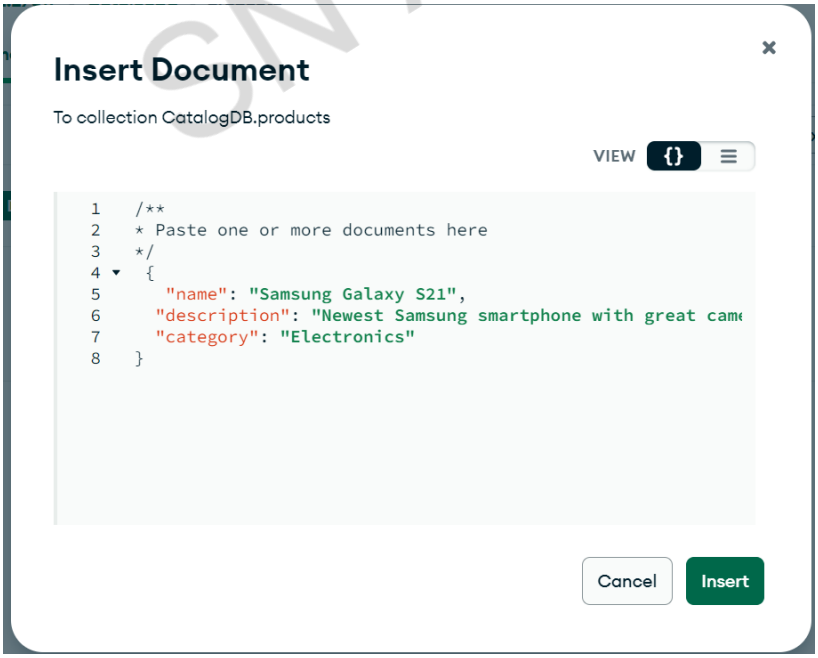
{

"name": "Samsung Galaxy S21",

"description": "Newest Samsung smartphone with great camera",

"category": "Electronics"

}



{

"name": "Sony Headphones",

"description": "Noise-cancelling headphones for immersive sound",

"category": "Audio"

}

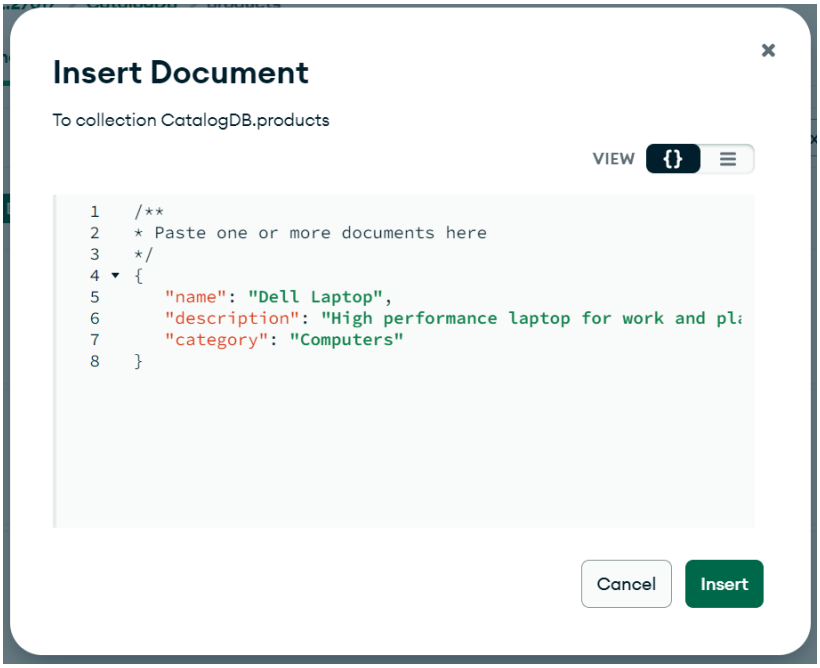
{

"name": "Dell Laptop",

"description": "High performance laptop for work and play",

"category": "Computers"

}



In MongoShell

>use CatalogDB

a. 1. Create a Text Index

To enable text search, you need to create a text index on the fields you want to search. Here, we'll create a text index on the `name` and `description` fields:

db.products.createIndex({ name: "text", description: "text" })

Output:

```
name_text_description_text
```

2. **Perform a Text Search**

Now, let's perform a text search. Suppose you want to search for products related to the word "latest":

db.products.find({ $text: { $search: "latest" } })

Output:

```
{
  _id: ObjectId('6683756d028a2202a8cb7087'),
  name: 'Apple iPhone 14',
  description: 'Latest model of iPhone with advanced features',
  category: 'Electronics'
}
```

db.products.find({ $text: { $search: "High performance" } })

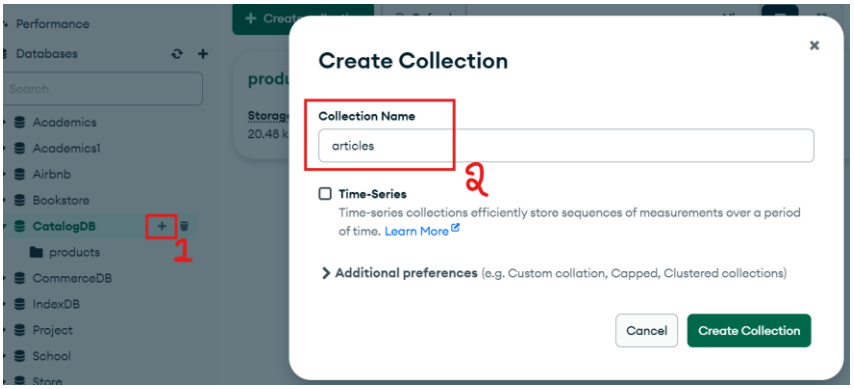
Output:

```
{
  _id: ObjectId('66837a7a028a2202a8cb708d'),
  name: 'Dell Laptop',
  description: 'High performance laptop for work and play',
  category: 'Computers'
}
```


b. Develop queries to illustrate excluding documents with certain words and phrases.

In MongoDB, you can use the $not operator combined with the $regex operator to exclude documents that contain certain words or phrases. Below are some examples of queries to illustrate this.

Add the following documents in the **collection articles** in MongoDB IDE.



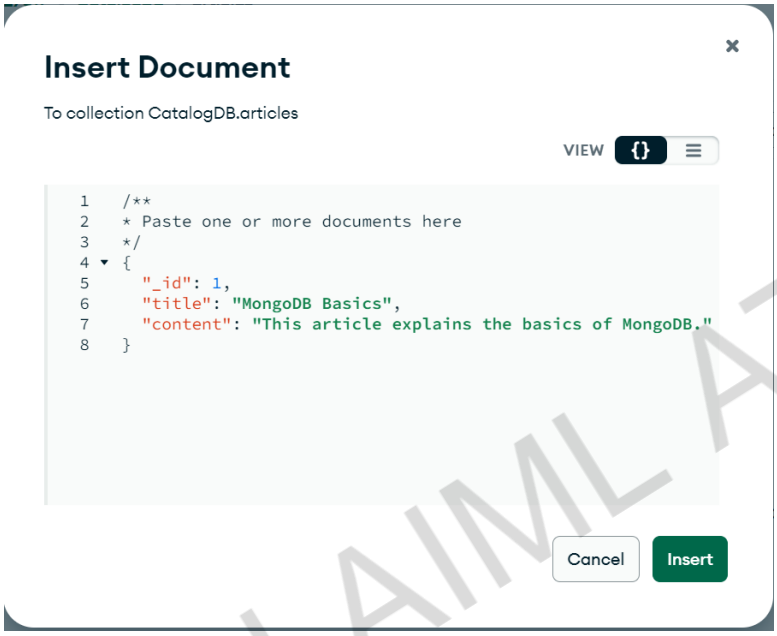
{

"_id": 1,

"title": "MongoDB Basics",

"content": "This article explains the basics of MongoDB."

}



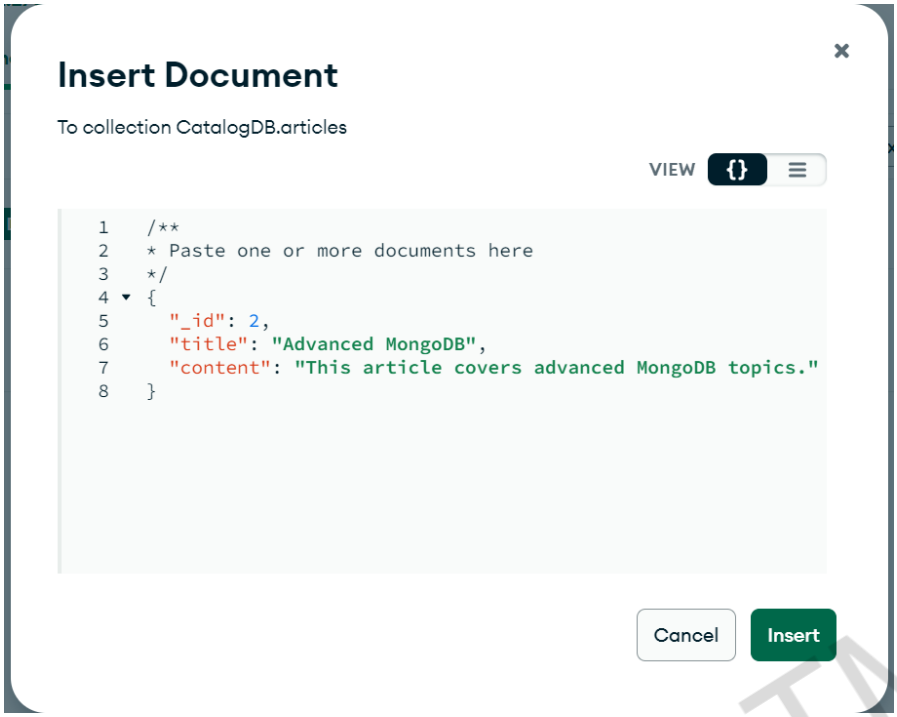
{

"_id": 2,

"title": "Advanced MongoDB",

"content": "This article covers advanced MongoDB topics."

}



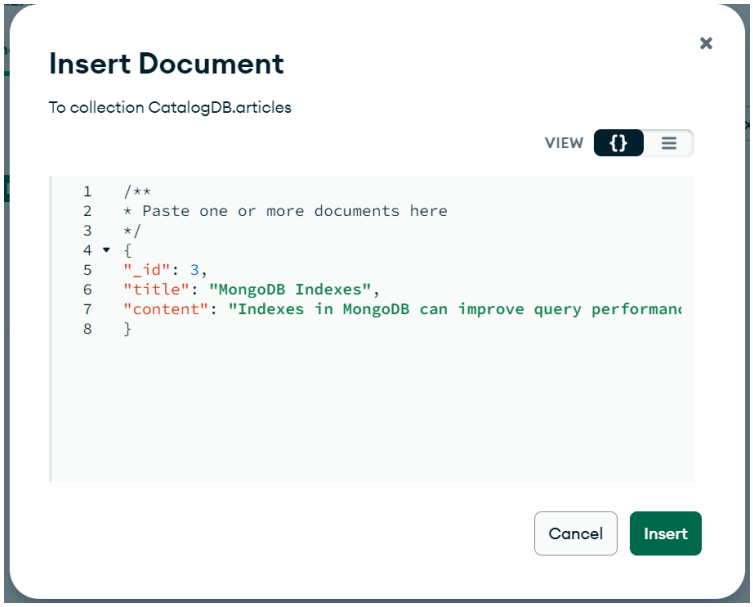
{

"_id": 3,

"title": "MongoDB Indexes",

"content": "Indexes in MongoDB can improve query performance."

}



{
"_id": 4,
"title": "Introduction to Databases",
"content": "This article gives an introduction to databases in general."
}

1. Exclude Documents Containing a Specific Word

To exclude documents that contain the word "advanced" in the '`content`' field:

db.articles.find({

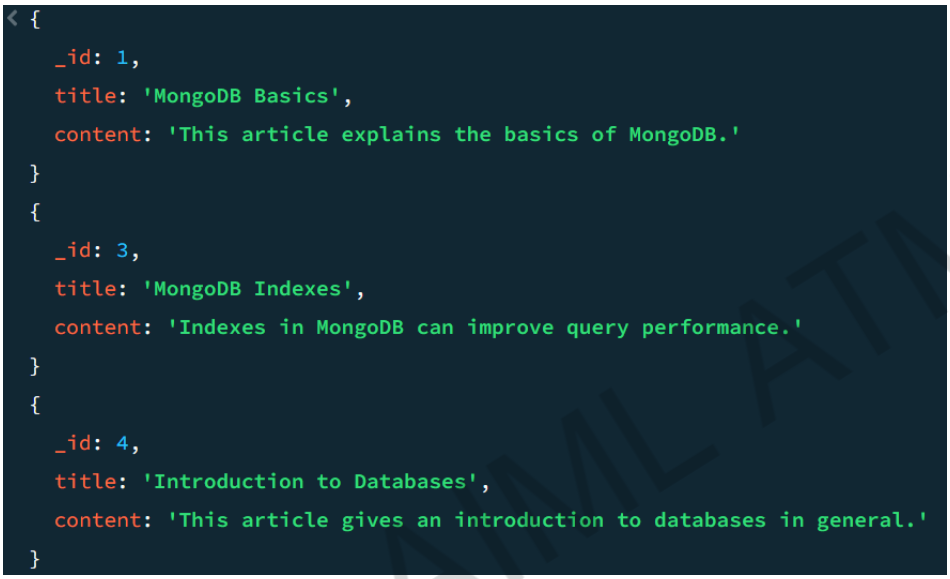
"content": {

$not: /advanced/

}

})

Output:



2. Exclude Documents Containing Any of Multiple Words

To exclude documents that contain either "improve" or "performance" in the ‘`content`’ field:

db.articles.find({

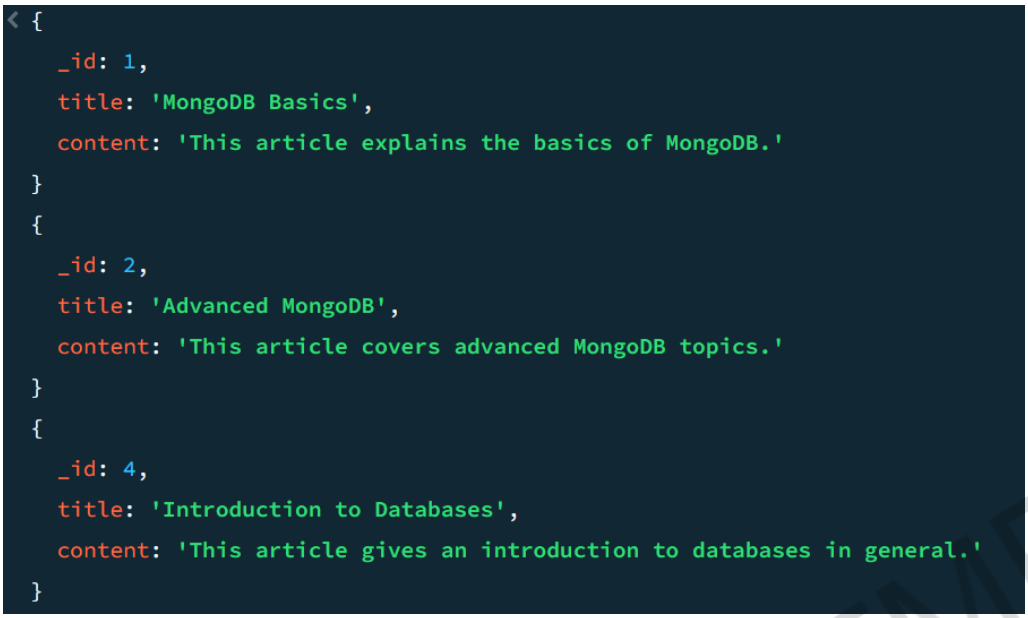
"content": {

$not: /(improve|performance)/

}

})

Output:

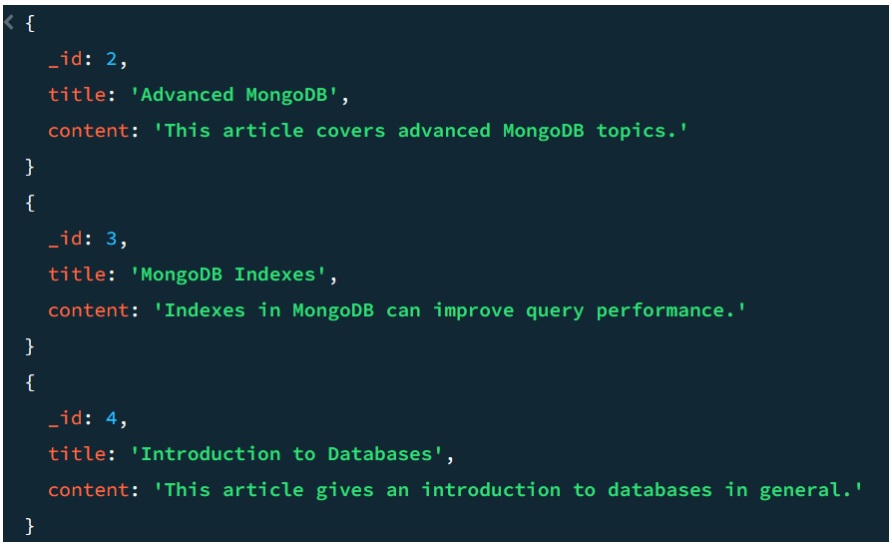


3. Exclude Documents Containing a Specific Phrase

To exclude documents that contain the phrase "MongoDB Basics" in the ‘`title`’ field:

```
db.articles.find({
  "title": {
    $not: /MongoDB Basics/
  }
})
```

Output:



4. Exclude Documents Based on Multiple Fields

To exclude documents that contain "MongoDB" in the ‘`title`’ or "advanced" in the ‘`content`’:

```
db.articles.find({
  $and: [
    { "title": { $not: /MongoDB/ } },
    { "content": { $not: /advanced/ } }
  ]
})
```

Output: