

# MongoDB Projection

In the previous tutorials, we learned **how to use criteria while Querying document** to get the selected documents from the collection. In this tutorial, we will learn another interesting topic of MongoDB which is **MongoDB Projection**. This is used when we want to get the selected fields of the documents rather than all fields.

For example, we have a collection where we have stored documents that have the fields: student\_name, student\_id, student\_age but we want to see only the student\_id of all the students then in that case we can use projection to get only the student\_id.

## Syntax:

```
db.collection_name.find({}, {field_key:1 or 0})
```

Do not worry about the syntax now, we will see an example to understand this.

## MongoDB Projection Example

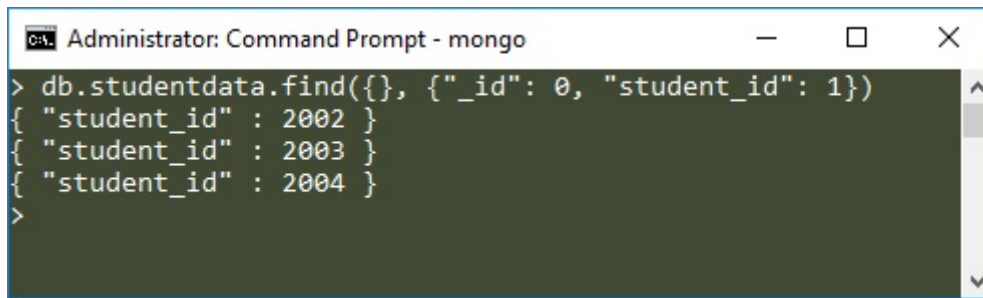
Lets take an example to understand the Projection in MongoDB. We have a collection named studentdata that has following documents.

```
> db.studentdata.find().pretty()
{
  "_id" : ObjectId("59bf63380be1d7770c3982af"),
  "student_name" : "Steve",
  "student_id" : 2002,
  "student_age" : 22
}
{
  "_id" : ObjectId("59bf63500be1d7770c3982b0"),
  "student_name" : "Carol",
  "student_id" : 2003,
  "student_age" : 22
}
{
  "_id" : ObjectId("59bf63650be1d7770c3982b1"),
  "student_name" : "Tim",
  "student_id" : 2004,
  "student_age" : 23
}
```

To get only the student\_id for all the documents, we will use the Projection like this:

```
> db.studentdata.find({}, {"_id": 0, "student_id": 1})
{ "student_id" : 2002 }
```

```
{ "student_id" : 2003 }  
{ "student_id" : 2004 }
```



Value 1 means show that field and 0 means do not show that field. When we set a field to 1 in Projection other fields are automatically set to 0, except `_id`, so to avoid the `_id` we need to specifically set it to 0 in projection. The vice versa is also true when we set few fields to 0, other fields set to 1 automatically(see the below example)

Another way of doing the same thing:

```
> db.studentdata.find({}, {"_id": 0, "student_name": 0, "student_age": 0})  
{ "student_id" : 2002 }  
{ "student_id" : 2003 }  
{ "student_id" : 2004 }
```

### Important Note:

Some of you may get this error while using Projection in Query:

```
Error: error: {  
  "ok" : 0,  
  "errmsg" : "Projection cannot have a mix of inclusion and exclusion.",  
  "code" : 2,  
  "codeName" : "BadValue"  
}
```

This happens when you set some fields to 0 and other to 1, in other words you mix inclusion and exclusion, the only exception is the `_id` field. for example: The following Query would produce this error:

```
db.studentdata.find({}, {"_id": 0, "student_name": 0, "student_age": 1})
```

This is because we have set `student_name` to 0 and other field `student_age` to 1. We can't mix these. You either set those fields that you don't want to display to 0 or set the fields to 1 that you want to display.