

Desnormalización

Obtener productos sin categorías ni comentarios

The screenshot shows the MongoDB Compass interface. The left sidebar displays the database structure with 'talleresBD' expanded, showing collections like 'productos'. The main panel is in 'Aggregations' view. The pipeline consists of two stages, both using the '\$project' operator to filter out documents where 'categoria' or 'comentarios' are not null.

```
1 {
2   $project: {"categoria":0}
3 }
4 {
5   $project: {"comentarios":0}
6 }
7 }
8 }
```

The 'PIPELINE OUTPUT' section shows a sample of 10 documents. The first three documents are visible, showing fields like '_id', 'productoID', 'nombre', 'descripcion', and 'precio'.

_id	productoID	nombre	descripcion	precio
ObjectId('6724ecda61c8d8adc84d9473')	"001"	"Camiseta"	"Camiseta de algodón"	"300000"
ObjectId('6724ecda61c8d8adc84d9474')	"002"	"Nike"	"Zapatos deportivos"	"102000"
ObjectId('6724edb661c8d8adc84d9476')	"003"	"Dress14n"		

Obtener productos juntos con las categorías

The screenshot shows the MongoDB Compass interface. The left sidebar displays the database structure with 'talleresBD' expanded, showing collections like 'productos'. The main panel is in 'Aggregations' view. The pipeline consists of two stages. The first stage uses '\$project' to filter out documents where 'comentarios' is not null. The second stage uses '\$lookup' to join the 'productos' collection with the 'categorias' collection based on the 'categoriaID' field.

```
1 {
2   $project: {"comentarios":0}
3 }
4 {
5   $lookup: {
6     from: "categorias"
7     localField: "categoriaID"
8     foreignField: "_id"
9     as: "categoria"
10  }
11 }
12 }
```

The 'PIPELINE OUTPUT' section shows a sample of 10 documents. The first three documents are visible, showing fields like '_id', 'productoID', 'nombre', 'descripcion', 'precio', and 'categoria' (which is an object containing 'categoriaID' and 'nombreCategoria').

_id	productoID	nombre	descripcion	precio	categoria
ObjectId('6724ecda61c8d8adc84d9473')	"001"	"Camiseta"	"Camiseta de algodón"	"300000"	{ categoriaID: "1", nombreCategoria: "Ropa" }
ObjectId('6724ecda61c8d8adc84d9474')	"002"	"Nike"	"Zapatos deportivos"	"102000"	{ categoriaID: "2", nombreCategoria: "Calzado" }
ObjectId('6724edb661c8d8adc84d9476')	"003"	"Dress14n"			{ categoriaID: "3", nombreCategoria: "Vestimenta" }

Obtener productos junto con los comentarios

The screenshot shows the MongoDB Compass interface with the following details:

- Database:** talleres > talleresBD > productos
- Aggregation Pipeline:**

```
1 [
2   {
3     $project: {"categoria": 0}
4   }
5 ]
```
- PIPELINE OUTPUT:** Sample of 10 documents. The first document is expanded to show:

```
{
  "_id": ObjectId('6724ecda61c8d8adc04d9473'),
  "productoID": "001",
  "nombre": "Camiseta",
  "descripcion": "Camiseta de algod6n",
  "precio": "30000",
  "comentarios": [
    {
      "comentarioID": "1",
      "texto": "Muy comoda",
      "cliente": "Juan"
    },
    {
      "comentarioID": "2",
      "texto": "Buena calidad",
      "cliente": "Maria"
    }
  ]
}
```