



**Universidad Gerardo Barrios**

**San miguel**

**Facultad de ciencia y tecnología**

**Carrera:**

Ingeniería de software y redes informáticas

**Materia:**

Administración de base de datos II

**Catedrático:**

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**Estudiante:**

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**Ciclo:**

2022/I

1. Crear una funcion que permita ingresar documentos de la coleccion products.

```
---
> show dbs
admin          0.000GB
almacen        0.000GB
biblioteca     0.000GB
config         0.000GB
dbexample      0.000GB
local          0.000GB
test           0.000GB
> use almacen
switched to db almacen
```

```
> show collections
products
>
```

```
> db.products.find()
{ "_id" : ObjectId("61fc0d17ebe90c6bd626d52f"), "cod" : "P01-22", "productName" : "shampoo", "price" : 7.25, "category" : "limpiez
a" }
> function add_products(
... cod_,productName_,price_,category_
... ){
... db.
Display all 101 possibilities? (y or n)
... db.products.insert({
... cod:cod_, productName:productName_, price:price_, category:category_})
```

```
> db.products.find()
{ "_id" : ObjectId("61fc0d17ebe90c6bd626d52f"), "cod" : "P01-22", "productName" : "shampoo", "price" : 7.25, "category" : "limpiez
a" }
> function add_products(
... cod_,productName_,price_,category_
... ){
... db.
Display all 101 possibilities? (y or n)
... db.products.insert({
... cod:cod_, productName:productName_, price:price_, category:category_})
... }
>
```

```

> add_products("P03-01","QUESO",4.30,"comestible")
> db.products.find()
{ "_id" : ObjectId("61fc0d17ebe90c6bd626d52f"), "cod" : "P01-22", "productName" : "shampoo", "price" : 7.25, "category" : "limpieza" }
{ "_id" : ObjectId("61fddc5a3dc137890c809ec3"), "cod" : "P02-21", "productName" : "Jamon", "price" : 3.25, "category" : "comestible" }
{ "_id" : ObjectId("61fddca83dc137890c809ec4"), "cod" : "P03-01", "productName" : "QUESO", "price" : 4.3, "category" : "comestible" }
>

```

```

> add_products("P03-02","crema",1.50,"comestible")
> db.products.find().pretty()
{
  "_id" : ObjectId("61fc0d17ebe90c6bd626d52f"),
  "cod" : "P01-22",
  "productName" : "shampoo",
  "price" : 7.25,
  "category" : "limpieza"
}
{
  "_id" : ObjectId("61fddc5a3dc137890c809ec3"),
  "cod" : "P02-21",
  "productName" : "Jamon",
  "price" : 3.25,
  "category" : "comestible"
}
{
  "_id" : ObjectId("61fddca83dc137890c809ec4"),
  "cod" : "P03-01",
  "productName" : "QUESO",
  "price" : 4.3,
  "category" : "comestible"
}
{
  "_id" : ObjectId("61fddd3c3dc137890c809ec5"),
  "cod" : "P03-02",
  "productName" : "crema",
  "price" : 1.5,
  "category" : "comestible"
}
>

```

2. Agregar una coleccion llamada supplier, agregar 5 documentos con diferentes estructuras de datos.

antes del paso 2

```
> show dbs
admin          0.000GB
almacen        0.000GB
biblioteca     0.000GB
config         0.000GB
dbexample      0.000GB
local          0.000GB
test           0.000GB
```

despues del paso 2

```
> use supplier
switched to db supplier
> show dbs
admin          0.000GB
almacen        0.000GB
biblioteca     0.000GB
config         0.000GB
dbexample      0.000GB
local          0.000GB
test           0.000GB
>
```

```
pepsi
> db.createCollection('NessCafe')
{ "ok" : 1 }
> show collections
CocaCola
NessCafe
Nestle
boquitas_diana
pepsi
>
```

```
pepsi
>
```

```
> db.createCollection('CocaCola')
{ "ok" : 1 }
> show collections
CocaCola
Nestle
>
```

```
pepsi
> db.createCollection('boquitas_diana')
{ "ok" : 1 }
> show collections
CocaCola
Nestle
boquitas_diana
pepsi
>
```

```
> show dbs
admin          0.000GB
almacen        0.000GB
biblioteca     0.000GB
config         0.000GB
dbexample      0.000GB
local          0.000GB
supplier       0.000GB
test           0.000GB
> use supplier
switched to db supplier
> show collections
CocaCola
NessCafe
Nestle
boquitas_diana
pepsi
>
```

```
> db.pepsi.insert({ conductor:"Juan" ,Entregas:["walmart","pupuseria roxy","super selector"] })
WriteResult({ "nInserted" : 1 })
>
```

```
> db.CocaCola.find().pretty()
> db.CocaCola.insert({
... id_camion:1,
... Entregas:["Farmacia San Rey","Farmacia Brasil","Walmart"],
... zona_trabajo:"San miguel",
... n_productos:500})
WriteResult({ "nInserted" : 1 })
>
```

```

> db.CocaCola.find().pretty()
{
  "_id" : ObjectId("61fed03ab58ca7f57cb31b63"),
  "id_camion" : 1,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "San miguel",
  "n_productos" : 500
}
>

```

```

db.NessCafe db.Nestle
> db.NessCafe.insert({
... id_camion:1,
... Entregas:[
... "Farmacia brasil","Walmart","super Selectos"],
... productos:[
... "cafe Rico","Cafe Musun","cafe listo"]})
WriteResult({ "nInserted" : 1 })
>

```

```

> db.boquitas_diana.insert({
... id_camion:1,
... lugar_destino:[
... "escuela generica 1","tienda de esquina generica","walmart"],
... productos:[
... "doritos",50,"jalapeño",100,"alboroto",25]})
WriteResult({ "nInserted" : 1 })
> db.boquitas_diana.find().pretty()
{
  "_id" : ObjectId("61fed273b58ca7f57cb31b65"),
  "id_camion" : 1,
  "lugar_destino" : [
    "escuela generica 1",
    "tienda de esquina generica",
    "walmart"
  ],
  "productos" : [
    "doritos",
    50,
    "jalapeño",
    100,
    "alboroto",
    25
  ]
}
>

```

```

WriteResult({ "nInserted" : 1 })
> db.boquitas_diana.insert({
... id_camion:1,
... lugar_destino:[
... "escuela generica 1","tienda de esquina generica","walmart"],
... productos:[
... "doritos",50,"jalapeño",100,"alboroto",25]})
WriteResult({ "nInserted" : 1 })
> db.boquitas_diana.find().pretty()
{
  "_id" : ObjectId("61fed273b58ca7f57cb31b65"),
  "id_camion" : 1,
  "lugar_destino" : [
    "escuela generica 1",
    "tienda de esquina generica",
    "walmart"
  ],
  "productos" : [
    "doritos",
    50,
    "jalapeño",
    100,
    "alboroto",
    25
  ]
}
>

```



```

> db.CocaCola.find().pretty()
{
  "_id" : ObjectId("61fed03ab58ca7f57cb31b63"),
  "id_camion" : 1,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "San miguel",
  "n_productos" : 500
}
{
  "_id" : ObjectId("61fed543b58ca7f57cb31b67"),
  "id_camion" : 2,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "Usulután",
  "n_productos" : 700
}
{
  "_id" : ObjectId("61fed578b58ca7f57cb31b68"),
  "id_camion" : 3,
  "Entregas" : [
    "Farmacia San Rey",
    "super selecto",
    "Walmart"
  ],
  "zona_trabajo" : "Usulután",
  "n_productos" : 450
}
{
  "_id" : ObjectId("61fed5c4b58ca7f57cb31b69"),
  "id_camion" : 4,
  "Entregas" : [
    "Farmacia brasil",
    "super selecto",
    "Walmart"
  ],
  "zona_trabajo" : "san miguel",
  "n_productos" : 400
}
{
  "_id" : ObjectId("61fed605b58ca7f57cb31b6a"),
  "id_camion" : 5,
  "Entregas" : [
    "Farmacia brasil",
    "super selecto"
  ],
  "zona_trabajo" : "San miguel",
  "n_productos" : 350
}
}

```

```

> db.Nestle.insert({ camion:{nombre:"Juanito",id_camion:1,size:"pequeño"}, entregas:["farmacias brasil","todito","dolar city"], productos:[ {nombre:"Leche condensada",cantidad:50}, {nombre:"leche en polvo",cantidad:75}, {nombre:"kitkat",cantidad:25}]}))
WriteResult({ "nInserted" : 1 })
> db.Nestle.find().pretty()
{
  "_id" : ObjectId("61fed43db58ca7f57cb31b66"),
  "camion" : {
    "nombre" : "Juanito",
    "id_camion" : 1,
    "size" : "pequeño"
  },
  "entregas" : [
    "farmacias brasil",
    "todito",
    "dolar city"
  ],
  "productos" : [
    {
      "nombre" : "Leche condensada",
      "cantidad" : 50
    },
    {
      "nombre" : "leche en polvo",
      "cantidad" : 75
    },
    {
      "nombre" : "kitkat",
      "cantidad" : 25
    }
  ]
}
>

```

```

> db.CocaCola.find({}, {_id:0}).pretty()
{
  "id_camion" : 1,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "San miguel",
  "n_productos" : 500
}
{
  "id_camion" : 2,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "Usulután",
  "n_productos" : 700
}
{
  "id_camion" : 3,
  "Entregas" : [
    "Farmacia San Rey",
    "super selecto",
    "Walmart"
  ],
  "zona_trabajo" : "Usulután",
  "n_productos" : 450
}
{
  "id_camion" : 4,
  "Entregas" : [
    "Farmacia brasil",
    "super selecto",
    "Walmart"
  ],
  "zona_trabajo" : "san miguel",
  "n_productos" : 400
}
{
  "id_camion" : 5,
  "Entregas" : [
    "Farmacia brasil",
    "super selecto"
  ],
  "zona_trabajo" : "San miguel",
  "n_productos" : 350
}
>

```

```
> db.pepsi.find({}, {_id:0}).pretty()
{
  "conductor" : "Juan",
  "Entregas" : [
    "walmart",
    "pupuseria roxy",
    "super selector"
  ]
}
{
  "conductor" : "Cesar",
  "Entregas" : [
    "pupuseria roxy",
    "super selector"
  ]
}
{
  "conductor" : "Angel",
  "Entregas" : [
    "pupuseria sarita",
    "despensa de don Juan",
    "escuela"
  ]
}
{
  "conductor" : "Angel",
  "Entregas" : [
    "pupuseria",
    "despensa de don Juan",
    "Universidad UGB"
  ]
}
2 >
```

```

> db.pepsi.find({}, {_id:0}).pretty()
{ "conductor" : "Juan", "Entregas" : "taqueria" }
{ "conductor" : "Cesar", "Entregas" : "taqueria" }
{
  "conductor" : "Angel",
  "Entregas" : [
    "pupuseria sarita",
    "despensa de don Juan",
    "escuela"
  ]
}
{
  "conductor" : "Angel",
  "Entregas" : [
    "pupuseria",
    "despensa de don Juan",
    "Universidad UGB"
  ]
}

```

3. Utilice los, update, updateMany, updateOne para modificar los documentos de proveedores

```

> db.CocaCola.updateOne({zona_trabajo:"Usulután"},{$set:{zona_trabajo:"San salvador"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.CocaCola.find({}, {_id:0}).pretty()
{
  "id_camion" : 1,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "La union",
  "n_productos" : 500
}
{
  "id_camion" : 2,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "San salvador",
  "n_productos" : 700
}

```

```
> db.CocaCola.find({}, {_id:0}).pretty()
{
  "id_camion" : 1,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "La union",
  "n_productos" : 500
}
{
  "id_camion" : 2,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "Usulután",
  "n_productos" : 700
}
{
  "id_camion" : 3,
  "Entregas" : [
    "Farmacia San Rey",
    "super selecto",
    "Walmart"
  ],
  "zona_trabajo" : "Usulután",
  "n_productos" : 450
}
{
}
```

4. Agregue una con coleccion departmens en donde valide los datos (codDepartment, departmentName)  
Ejs.

codDepartment	departmentName
Dept01	San Ana

```
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.CocaCola.find({}, {_id:0}).pretty()
{
  "id_camion" : 1,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "La union",
  "n_productos" : 500
}
{
  "id_camion" : 2,
  "Entregas" : [
    "Farmacia San Rey",
    "Farmacia Brasil",
    "Walmart"
  ],
  "zona_trabajo" : "San salvador",
  "n_productos" : 700
}
{
  "id_camion" : 3,
  "Entregas" : [
    "Farmacia San Rey",
    "super selecto",
    "Walmart"
  ],
  "zona_trabajo" : "Usulután",
  "n_productos" : 450
}
```

```
> db.CocaCola.updateOne({zona_trabajo:"Usulután"},{$set:{zona_trabajo:"San salvador"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
```

```
> show collections
CocaCola
NessCafe
Nestle
boquitas_diana
pepsi
>
```

```
> db.createCollection('departmens',{ validator: {$and: [ {codDepartm
ent:{$type:"string"}}, {departmentName:{$type:"string"}} ]}})
{ "ok" : 1 }
>
```

```
> db.departmens.createIndex({"codDepartment":1},{unique:true})
{
  "numIndexesBefore" : 1,
  "numIndexesAfter" : 2,
  "createdCollectionAutomatically" : false,
  "ok" : 1
}
```

```
> db.departmens.insert({codDepartment:"DEPT01",departmentName:"San miguel"})
WriteResult({ "nInserted" : 1 })
> db.departmens.insert({codDepartment:"DEPT02",departmentName:"La Union"})
WriteResult({ "nInserted" : 1 })
```



```
> db.departments.insert({codDepartment:"DEPT01",departmentName:"San miguel"})
WriteResult({ "nInserted" : 1 })
> db.departments.insert({codDepartment:"DEPT02",departmentName:"La Union"})
WriteResult({ "nInserted" : 1 })
> db.departments.insert({codDepartment:"DEPT02",departmentName:"La Union"})
WriteResult({
  "nInserted" : 0,
  "writeError" : {
    "code" : 11000,
    "errmsg" : "E11000 duplicate key error collection: supplier.departments index:
codDepartment_1 dup key: { codDepartment: \"DEPT02\" }"
  }
})
```

```
> db.departments.find().pretty()
{
  "_id" : ObjectId("61f6eea34e492d35ade2c52ab"),
  "codDepartment" : "DEPT01",
  "departmentName" : "San miguel"
}
{
  "_id" : ObjectId("61f6eea42e492d35ade2c52ac"),
  "codDepartment" : "DEPT02",
  "departmentName" : "La Union"
}
>
```