MongoDB Physical Model

Schema for:

Model name: Mondongo
Author:
Version:
File name: MongoDB model Mondongo.hck.json
File path: C:\MongoProject\MongoDB model Mondongo.hck.json
Printed On: Sat May 25 2024 15:49:26 GMT-0500 (Colombia Standard Time)
Created with: Hackolade - Polyglot data modeling for NoSQL databases, storage formats, REST APIs, and JSON in RDBMS
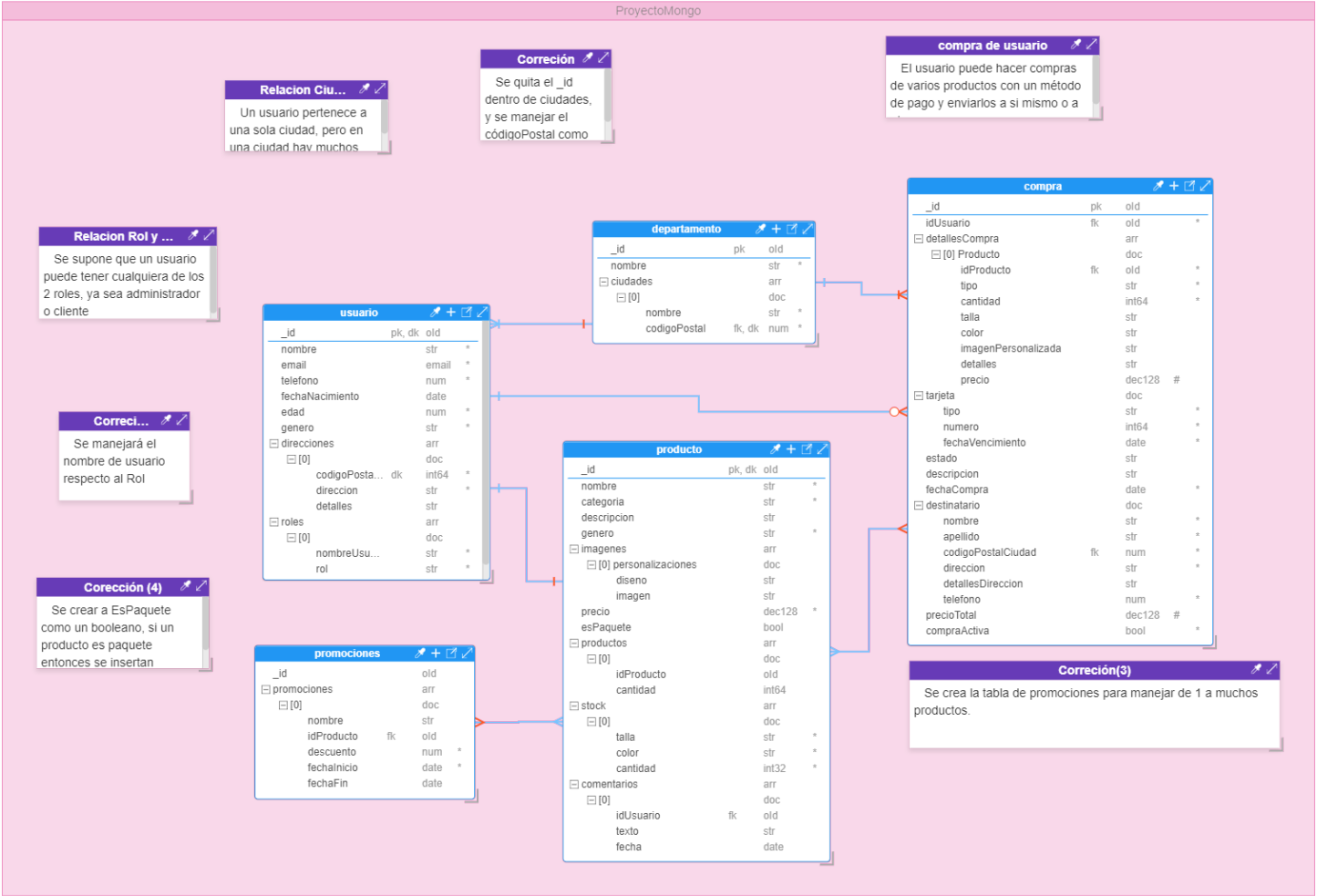
1. Model

2. Databases

3. Relationships

3.1 fk compra.IdUsuario to usuario._id
3.2 fk producto.comentarios.[0].idUsuario to usuario._id
3.3 fk promociones.promociones.[0].IdProducto to producto._id
3.4 fk departamento.ciudades.[0].codigoPostal to usuario.direcciones.[0].codigoPostalCiudad
3.5 fk compra.destinatario.codigoPostalCiudad to departamento.ciudades.[0].codigoPostal
3.6 fk compra.detallesCompra.[0].idTipo to producto._id

1. MODEL

1.1 Model Mondongo

1.1.1 Mondongo Entity Relationship Diagram

1.1.2 Mondongo Properties

1.1.2.1 Details tab

PROPERTY	VALUE
Model name	Mondongo
Technical name	
Description	
Author	
Version	
Target	MongoDB
DB version	v7.x
Synchronization Id	
Lineage capture	
Polyglot models	
Comments	

1.1.2.2 Options tab

PROPERTY	VALUE
Color	

1.1.3 Mondongo DB Definitions

2. DATABASES

2.1 Database ProyectoMongo
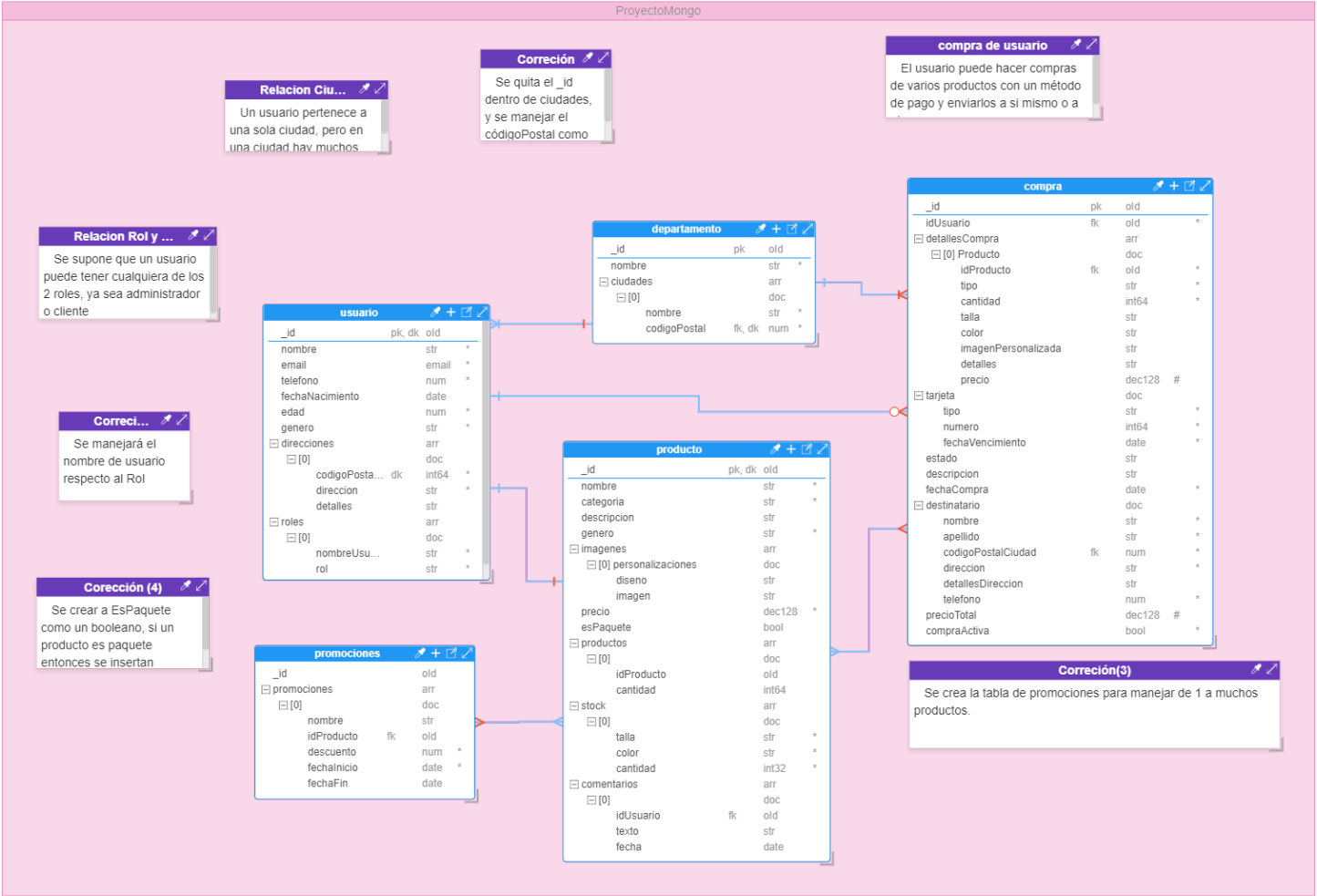
2.1.1 ProyectoMongo Properties

PROPERTY	VALUE
Database name	ProyectoMongo
Technical name	
Activated	true
Enable sharding	
Description	
Comments	

2.1.2 ProyectoMongo Collections

2.1.2.1 Collection usuario

2.1.2.1.1 usuario Tree Diagram

{_id}   **_id**
        objectId

{ABC}   **nombre**
        string

{ABC}   **email**
        string

{123}   **telefono**
        numeric

{dt}   **fechaNacimiento**
        date

usuario   {123}   **edad**
document   *numeric*

{ABC}   **genero**   {123}   **codigoPostalCiudad**
        string   *numeric*

[...]   **direcciones**   {...}   **[0]***   {ABC}   **direccion**
        array   *document*   *string*

                                              {ABC}   **detalles**
                                                      string

                                              {ABC}   **nombreUsuario**
                                                      string

[...]   **roles**   {...}   **[0]***   {ABC}   **rol**
        array   *document*   *string*

                                              {ABC}   **clave**
                                                      string
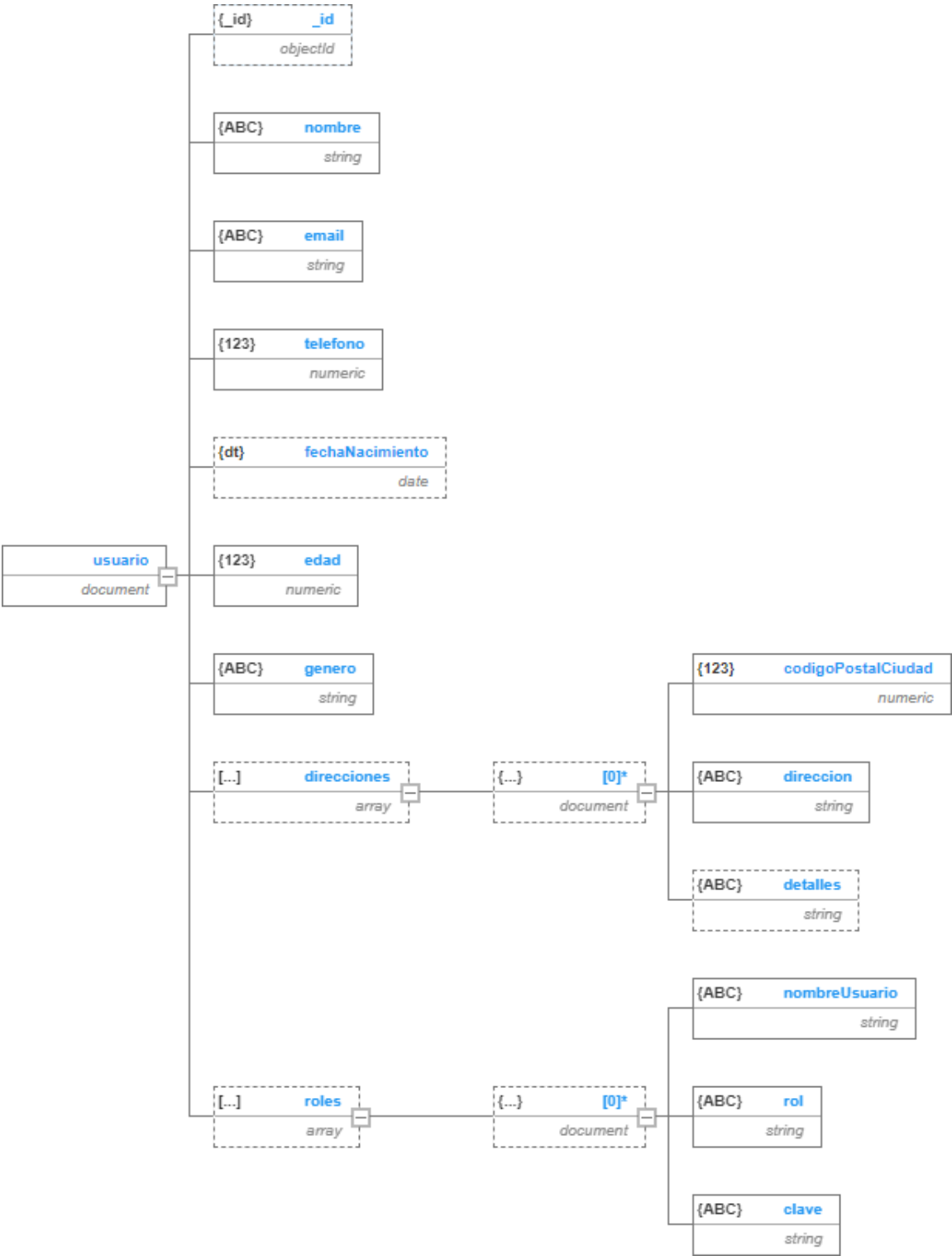
2.1.2.1.2 usuario Properties

PROPERTY	VALUE
Collection name	usuario
Technical name	
Activated	true
Id	
$ref	
Description	
Database	ProyectoMongo
Capped	
Time series	
Size	
Max	
Storage engine	WiredTiger
Config String	
Validation level	Moderate
Validation action	Warn
Encryption metadata	
Additional properties	false
Workload analysis	
[1] Actor	
Description	
Number of documents	
Avg document size (Bytes)	
Read-to-Write ratio	
Keep forever	
Retention (months)	
Write operations	
Read operations	
Comments	

2.1.2.1.3 usuario Fields

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
_id	objectId	false	pk, dk		
nombre	string	true			
email	email	true			
telefono	numeric	true			
fechaNacimiento	date	false			
edad	numeric	true			
genero	string	true			
direcciones	array	false			
[0]	document	false			
codigoPostalCiudad	integer64	true	dk		
direccion	string	true			
detalles	string	false			
roles	array	false			
[0]	document	false			
nombreUsuario	string	true			
rol	string	true			
clave	string	true			

2.1.2.1.3.1 Field _id

2.1.2.1.3.1.1 _id Tree Diagram

2.1.2.1.3.1.2 _id properties

PROPERTY	VALUE
Name	_id
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	
Primary key	true
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Sample	
Comments	

2.1.2.1.3.2 Field nombre

2.1.2.1.3.2.1 nombre Tree Diagram

2.1.2.1.3.2.2 nombre properties

PROPERTY	VALUE
Name	nombre
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.1.3.3 Field email

2.1.2.1.3.3.1 email Tree Diagram

{ABC}   email
          string

2.1.2.1.3.3.2 email properties

PROPERTY	VALUE
Name	email
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	email
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.1.3.4 Field telefono

2.1.2.1.3.4.1 telefono Tree Diagram

```
{123}    telefono
           numeric
```

2.1.2.1.3.4.2 telefono properties

PROPERTY	VALUE
Name	telefono
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.1.3.5 Field fechaNacimiento

2.1.2.1.3.5.1 fechaNacimiento Tree Diagram

2.1.2.1.3.5.2 fechaNacimiento properties

PROPERTY	VALUE
Name	fechaNacimiento
Technical name	
Activated	true
Id	
Field-level encryption	
Type	date
Description	
Dependencies	
Required	
Primary key	false
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Now	
Faker function	
Sample	
Comments	

2.1.2.1.3.6 Field edad

2.1.2.1.3.6.1 edad Tree Diagram

{123}	edad
	numeric

2.1.2.1.3.6.2 edad properties

PROPERTY	VALUE
Name	edad
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	18
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.1.3.7 Field genero

2.1.2.1.3.7.1 genero Tree Diagram

{ABC}   genero
              string

2.1.2.1.3.7.2 genero properties

PROPERTY	VALUE
Name	genero
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	Hombre,Mujer
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.1.3.8 Field direcciones

2.1.2.1.3.8.1 direcciones Tree Diagram

2.1.2.1.3.8.2 direcciones Hierarchy

Parent field: **usuario**
Child field(s):

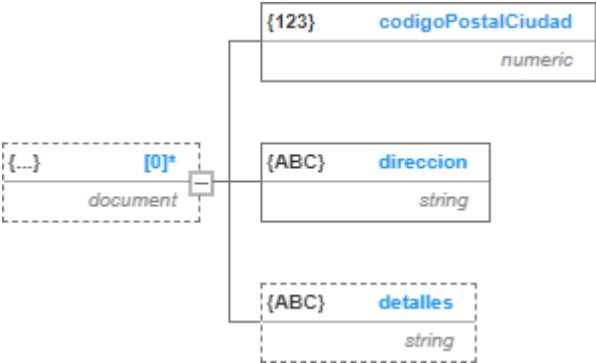| FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0]	document	false			

2.1.2.1.3.8.3 direcciones properties

PROPERTY	VALUE
Name	direcciones
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	

PROPERTY	VALUE
Name	direcciones
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	

PROPERTY	VALUE
Required	
Primary key	false
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.1.3.9 Field [0]

2.1.2.1.3.9.1 [0] Tree Diagram

2.1.2.1.3.9.2 [0] Hierarchy

Parent field: **direcciones**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
codigoPostalCiudad	numeric	true			
direccion	string	true			
detalles	string	false			

2.1.2.1.3.9.3 [0] properties

PROPERTY	VALUE
Display name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.1.3.10 Field codigoPostalCiudad

2.1.2.1.3.10.1 codigoPostalCiudad Tree Diagram

{123}	codigoPostalCiudad
	numeric

2.1.2.1.3.10.2 codigoPostalCiudad properties

PROPERTY	VALUE
Name	codigoPostalCiudad
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	integer64
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.1.3.11 Field direccion

2.1.2.1.3.11.1 direccion Tree Diagram

{ABC}   direccion
              string

2.1.2.1.3.11.2 direccion properties

PROPERTY	VALUE
Name	direccion
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.1.3.12 Field detalles

2.1.2.1.3.12.1 detalles Tree Diagram

{ABC}   detalles
                string

2.1.2.1.3.12.2 detalles properties

PROPERTY	VALUE
Name	detalles
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.1.3.13 Field roles

2.1.2.1.3.13.1 roles Tree Diagram
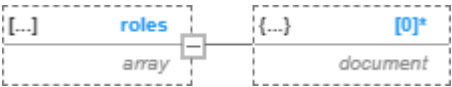
2.1.2.1.3.13.2 roles Hierarchy

Parent field: **usuario**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0]	document	false			

2.1.2.1.3.13.3 roles properties

PROPERTY	VALUE
Name	roles
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	

PROPERTY	VALUE
Name	roles
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	

PROPERTY	VALUE
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.1.3.14 Field [0]

2.1.2.1.3.14.1 [0] Tree Diagram
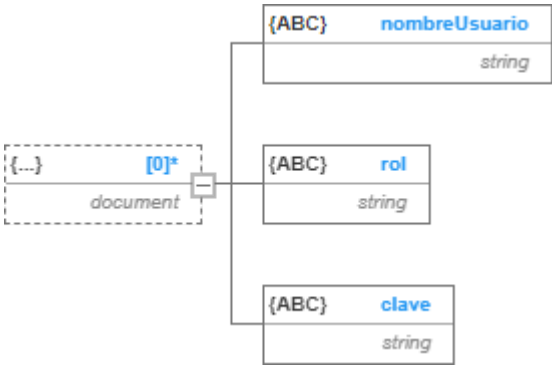
2.1.2.1.3.14.2 [0] Hierarchy

Parent field: **roles**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
nombreUsuario	string	true			
rol	string	true			
clave	string	true			

2.1.2.1.3.14.3 [0] properties

PROPERTY	VALUE
Display name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.1.3.15 Field nombreUsuario

2.1.2.1.3.15.1 nombreUsuario Tree Diagram

{ABC}   nombreUsuario
                  string

2.1.2.1.3.15.2 nombreUsuario properties

PROPERTY	VALUE
Name	nombreUsuario
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.1.3.16 Field rol

2.1.2.1.3.16.1 rol Tree Diagram

2.1.2.1.3.16.2 rol properties

PROPERTY	VALUE
Name	rol
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	Cliente,Admin
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.1.3.17 Field clave

2.1.2.1.3.17.1 clave Tree Diagram

{ABC}	clave
	string

2.1.2.1.3.17.2 clave properties

PROPERTY	VALUE
Name	clave
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.1.4 usuario JSON Schema

```json
{
    "$schema": "http://json-schema.org/draft-04/schema#",
    "type": "object",
    "title": "usuario",
    "properties": {
        "_id": {
            "type": "string",
            "pattern": "^[a-fA-F0-9]{24}$"
        },
        "nombre": {
            "type": "string"
        },
        "email": {
            "type": "string",
            "format": "email"
        },
        "telefono": {
            "type": "number"
        },
        "fechaNacimiento": {
            "type": "string",
            "format": "date"
        },
        "edad": {
            "type": "number",
            "minimum": 18
        },
        "genero": {
            "type": "string",
            "enum": [
                "Hombre",
                "Mujer"
            ]
        },
        "direcciones": {
            "type": "array",
            "additionalItems": true,
            "items": {
                "type": "object",
                "properties": {
                    "codigoPostalCiudad": {
                        "type": "integer"
                    },
                    "direccion": {
                        "type": "string"
                    },
                    "detalles": {
                        "type": "string"
                    }
                },
                "additionalProperties": false,
                "required": [
                    "codigoPostalCiudad",
                    "direccion"
                ]
            }
        },
        "roles": {
            "type": "array",
            "additionalItems": true,
```

```
      "items": {
        "type": "object",
        "properties": {
          "nombreUsuario": {
            "type": "string"
          },
          "rol": {
            "type": "string",
            "enum": [
              "Cliente",
              "Admin"
            ]
          },
          "clave": {
            "type": "string"
          }
        },
        "additionalProperties": false,
        "required": [
          "nombreUsuario",
          "rol",
          "clave"
        ]
      }
    }
  },
  "additionalProperties": false,
  "required": [
    "nombre",
    "email",
    "telefono",
    "edad",
    "genero"
  ]
}
```

2.1.2.1.5 usuario JSON data

```
{
    "_id": ObjectId("b54b6bb9edcfab856af18ad9"),
    "nombre": "Lorem",
    "email": "sample@email.com",
    "telefono": 97,
    "fechaNacimiento": ISODate("2016-04-08T15:06:21.595Z"),
    "edad": 73,
    "genero": "Hombre",
    "direcciones": [
        {
            "codigoPostalCiudad": Long(1958365009221091300),
            "direccion": "Lorem",
            "detalles": "Lorem"
        }
    ],
    "roles": [
        {
            "nombreUsuario": "Lorem",
            "rol": "Cliente",
            "clave": "Lorem"
        }
    ]
}
```

2.1.2.1.6 usuario Target Script

```
use ProyectoMongo;

db.createCollection("usuario", {
    "capped": false,
    "validator": {
        "$jsonSchema": {
            "bsonType": "object",
            "title": "usuario",
            "properties": {
                "_id": {
                    "bsonType": "objectId"
                },
                "nombre": {
                    "bsonType": "string"
                },
                "email": {
                    "bsonType": "string"
                },
                "telefono": {
                    "bsonType": "number"
                },
                "fechaNacimiento": {
                    "bsonType": "date"
                },
                "edad": {
                    "bsonType": "number",
                    "minimum": 18
                },
                "genero": {
                    "bsonType": "string",
                    "enum": [
                        "Hombre",
                        "Mujer"
                    ]
                },
                "direcciones": {
                    "bsonType": "array",
                    "additionalItems": true,
                    "items": {
                        "bsonType": "object",
                        "properties": {
                            "codigoPostalCiudad": {
                                "bsonType": "long"
                            },
                            "direccion": {
                                "bsonType": "string"
                            },
                            "detalles": {
                                "bsonType": "string"
                            }
                        },
                        "additionalProperties": false,
                        "required": [
                            "codigoPostalCiudad",
                            "direccion"
                        ]
                    }
                },
                "roles": {
                    "bsonType": "array",
```

```
                  "additionalItems": true,
                  "items": {
                     "bsonType": "object",
                     "properties": {
                        "nombreUsuario": {
                           "bsonType": "string"
                        },
                        "rol": {
                           "bsonType": "string",
                           "enum": [
                              "Cliente",
                              "Admin"
                           ]
                        },
                        "clave": {
                           "bsonType": "string"
                        }
                     },
                     "additionalProperties": false,
                     "required": [
                        "nombreUsuario",
                        "rol",
                        "clave"
                     ]
                  }
               }
            },
            "additionalProperties": false,
            "required": [
               "nombre",
               "email",
               "telefono",
               "edad",
               "genero"
            ]
         }
      },
      "validationLevel": "moderate",
      "validationAction": "warn"
   });
```

2.1.2.2 Collection departamento

2.1.2.2.1 departamento Tree Diagram
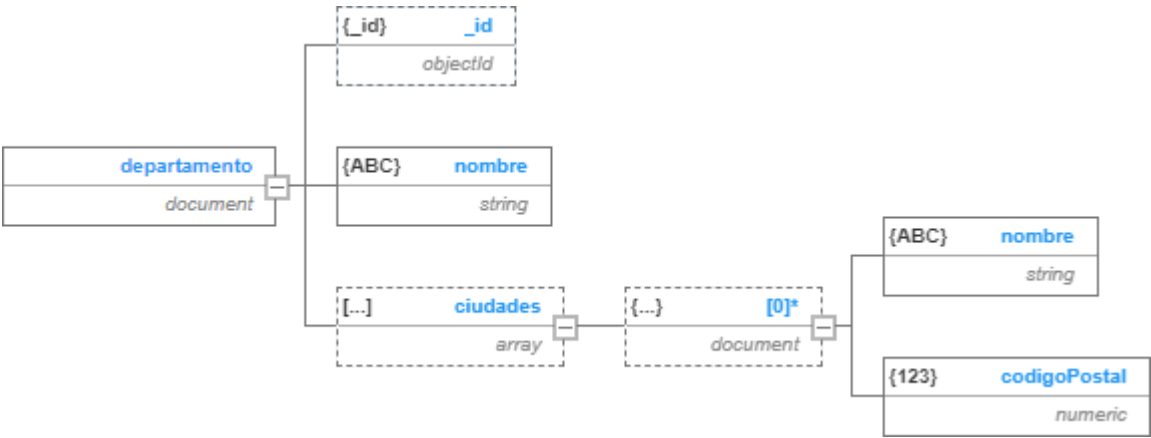
2.1.2.2.2 departamento Properties

PROPERTY	VALUE
Collection name	departamento
Technical name	
Activated	true
Id	
$ref	
Description	
Database	ProyectoMongo
Capped	
Time series	
Size	
Max	
Storage engine	WiredTiger
Config String	
Validation level	Moderate
Validation action	Warn
Encryption metadata	
Additional properties	false
Workload analysis	
[1] Actor	
Description	
Number of documents	
Avg document size (Bytes)	
Read-to-Write ratio	
Keep forever	
Retention (months)	
Write operations	
Read operations	
Comments	

2.1.2.2.3 departamento Fields

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
_id	objectId	false	pk		
nombre	string	true			
ciudades	array	false			
[0]	document	false			
nombre	string	true			
codigoPostal	numeric	true	fk, dk		

2.1.2.2.3.1 Field _id

2.1.2.2.3.1.1 _id Tree Diagram

2.1.2.2.3.1.2 _id properties

PROPERTY	VALUE
Name	_id
Technical name	

PROPERTY	VALUE
Name	_id
Technical name	

PROPERTY	VALUE
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	false
Primary key	true
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Sample	
Comments	

2.1.2.2.3.2 Field nombre

2.1.2.2.3.2.1 nombre Tree Diagram

{ABC}   nombre
                 string

2.1.2.2.3.2.2 nombre properties

PROPERTY	VALUE
Name	nombre
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.2.3.3 Field ciudades

2.1.2.2.3.3.1 ciudades Tree Diagram

2.1.2.2.3.3.2 ciudades Hierarchy

Parent field: **departamento**
Child field(s):

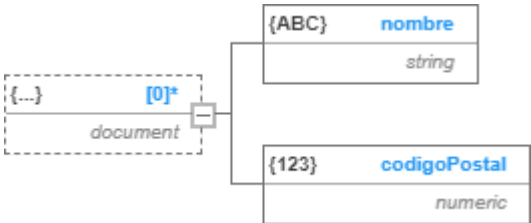| FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0]	document	false			

2.1.2.2.3.3.3 ciudades properties

PROPERTY	VALUE
Name	ciudades
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	

PROPERTY	VALUE
Name	ciudades
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	

PROPERTY	VALUE
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.2.3.4 Field [0]

2.1.2.2.3.4.1 [0] Tree Diagram

2.1.2.2.3.4.2 [0] Hierarchy

Parent field: **ciudades**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
nombre	string	true			
codigoPostal	numeric	true			

2.1.2.2.3.4.3 [0] properties

PROPERTY	VALUE
Display name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.2.3.5 Field nombre

2.1.2.2.3.5.1 nombre Tree Diagram

2.1.2.2.3.5.2 nombre properties

PROPERTY	VALUE
Name	nombre
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.2.3.6 Field codigoPostal

2.1.2.2.3.6.1 codigoPostal Tree Diagram

{123}   codigoPostal
              numeric

2.1.2.2.3.6.2 codigoPostal properties

PROPERTY	VALUE
Name	codigoPostal
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	usuario
Foreign field	codigoPostalCiudad
Relationship type	Foreign Key
Relationship name	fk departamento.ciudades.[0].codigoPostal to usuario.direcciones.[0].codigoPostalCiudad
Cardinality	1
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.2.4 departamento JSON Schema

```
{
    "$schema": "http://json-schema.org/draft-04/schema#",
    "type": "object",
    "title": "departamento",
    "properties": {
        "_id": {
            "type": "string",
            "pattern": "^[a-fA-F0-9]{24}$"
        },
        "nombre": {
            "type": "string"
        },
        "ciudades": {
            "type": "array",
            "additionalItems": true,
            "items": {
                "type": "object",
                "properties": {
                    "nombre": {
                        "type": "string"
                    },
                    "codigoPostal": {
                        "type": "number"
                    }
                },
                "additionalProperties": false,
                "required": [
                    "nombre",
                    "codigoPostal"
                ]
            }
        }
    },
    "additionalProperties": false,
    "required": [
        "nombre"
    ]
}
```

2.1.2.2.5 departamento JSON data

```
{
    "_id": ObjectId("d1581fedeaaffed6ca7b725c"),
    "nombre": "Lorem",
    "ciudades": [
        {
            "nombre": "Lorem",
            "codigoPostal": -39
        }
    ]
}
```

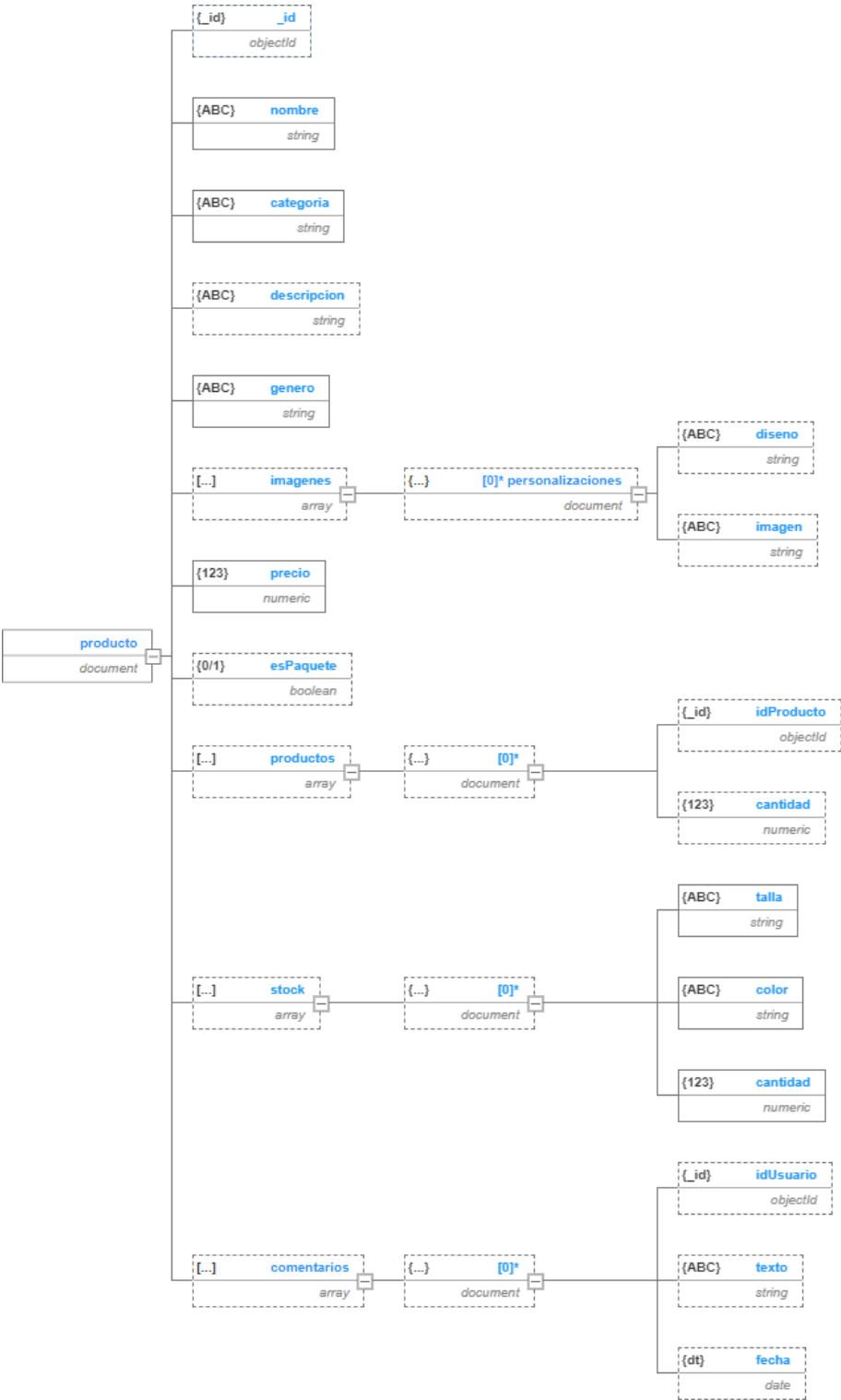### 2.1.2.2.6 departamento Target Script

```
use ProyectoMongo;

db.createCollection("departamento", {
    "capped": false,
    "validator": {
        "$jsonSchema": {
            "bsonType": "object",
            "title": "departamento",
            "properties": {
                "_id": {
                    "bsonType": "objectId"
                },
                "nombre": {
                    "bsonType": "string"
                },
                "ciudades": {
                    "bsonType": "array",
                    "additionalItems": true,
                    "items": {
                        "bsonType": "object",
                        "properties": {
                            "nombre": {
                                "bsonType": "string"
                            },
                            "codigoPostal": {
                                "bsonType": "number"
                            }
                        },
                        "additionalProperties": false,
                        "required": [
                            "nombre",
                            "codigoPostal"
                        ]
                    }
                }
            },
            "additionalProperties": false,
            "required": [
                "nombre"
            ]
        }
    },
    "validationLevel": "moderate",
    "validationAction": "warn"
});
```
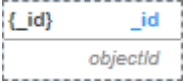
2.1.2.3 Collection producto

2.1.2.3.1 producto Tree Diagram

```
{_id}        _id
             objectId

{ABC}        nombre
             string

{ABC}        categoria
             string

{ABC}        descripcion
             string

{ABC}        genero
             string
                                                              {ABC}        diseno
                                                                           string
[...]        imagenes      {...}   [0]* personalizaciones
             array                        document
                                                              {ABC}        imagen
                                                                           string

{123}        precio
             numeric

producto
document
             {0/1}        esPaquete
                          boolean
                                                              {_id}        idProducto
                                                                           objectId
             [...]        productos     {...}      [0]*
                          array                  document
                                                              {123}        cantidad
                                                                           numeric


                                                              {ABC}        talla
                                                                           string

             [...]        stock         {...}      [0]*       {ABC}        color
                          array                  document                  string


                                                              {123}        cantidad
                                                                           numeric


                                                              {_id}        idUsuario
                                                                           objectId

             [...]        comentarios   {...}      [0]*       {ABC}        texto
                          array                  document                  string


                                                              {dt}         fecha
                                                                           date
```

2.1.2.3.2 producto Properties

PROPERTY	VALUE
Collection name	producto
Technical name	
Activated	true
Id	
$ref	
Description	
Database	ProyectoMongo
Capped	
Time series	
Size	
Max	
Storage engine	WiredTiger
Config String	
Validation level	Moderate
Validation action	Warn
Encryption metadata	
Additional properties	false
Workload analysis	
[1] Actor	
Description	
Number of documents	
Avg document size (Bytes)	
Read-to-Write ratio	
Keep forever	
Retention (months)	
Write operations	
Read operations	
Comments	

2.1.2.3.3 producto Fields

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
_id	objectId	false	pk, dk		
nombre	string	true			
categoria	string	true			
descripcion	string	false			
genero	string	true			
imagenes	array	false			
[0] personalizaciones	document	false			
diseno	string	false			
imagen	string	false			
precio	decimal128	true			
esPaquete	boolean	false			
productos	array	false			
[0]	document	false			
idProducto	objectId	false			
cantidad	integer64	false			
stock	array	false			
[0]	document	false			
talla	string	true			
color	string	true			
cantidad	integer32	true			
comentarios	array	false			
[0]	document	false			
idUsuario	objectId	false	fk		
texto	string	false			
fecha	date	false			

2.1.2.3.3.1 Field _id

2.1.2.3.3.1.1 _id Tree Diagram

```
{_id}           _id
          objectId
```

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS

2.1.2.3.3.1.2 _id properties

PROPERTY	VALUE
Name	_id
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	
Primary key	true
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Sample	
Comments	

2.1.2.3.3.2 Field nombre

2.1.2.3.3.2.1 nombre Tree Diagram

2.1.2.3.3.2.2 nombre properties

PROPERTY	VALUE
Name	nombre
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.3 Field categoria

2.1.2.3.3.3.1 categoria Tree Diagram

{ABC}	categoria
	string

2.1.2.3.3.3.2 categoria properties

PROPERTY	VALUE
Name	categoria
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.4 Field descripcion

2.1.2.3.3.4.1 descripcion Tree Diagram

{ABC}   descripcion
            string
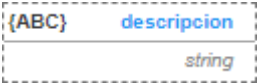
2.1.2.3.3.4.2 descripcion properties

PROPERTY	VALUE
Name	descripcion
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.5 Field genero

2.1.2.3.3.5.1 genero Tree Diagram

2.1.2.3.3.5.2 genero properties

PROPERTY	VALUE
Name	genero
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	Hombre,Mujer,Unisex
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.6 Field imagenes

2.1.2.3.3.6.1 imagenes Tree Diagram
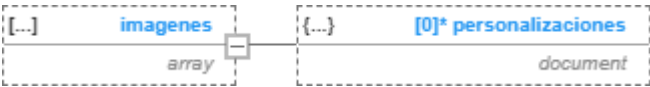
2.1.2.3.3.6.2 imagenes Hierarchy

Parent field: **producto**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0] personalizaciones	document	false			

2.1.2.3.3.6.3 imagenes properties

PROPERTY	VALUE
Name	imagenes
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	

PROPERTY	VALUE
Name	imagenes
Technical name	
Activated	true
Id	
Field-level encryption	

PROPERTY	VALUE
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.3.3.7 Field [0] personalizaciones

2.1.2.3.3.7.1 [0] personalizaciones Tree Diagram

2.1.2.3.3.7.2 [0] personalizaciones Hierarchy

Parent field: **imagenes**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
diseno	string	false			
imagen	string	false			

2.1.2.3.3.7.3 [0] personalizaciones properties

PROPERTY	VALUE
Display name	personalizaciones
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.3.3.8 Field diseno

2.1.2.3.3.8.1 diseno Tree Diagram

{ABC}   diseno
            string

2.1.2.3.3.8.2 diseno properties

PROPERTY	VALUE
Name	diseno
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	Predeterminado,Personalizado
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.9 Field imagen

2.1.2.3.3.9.1 imagen Tree Diagram

2.1.2.3.3.9.2 imagen properties

PROPERTY	VALUE
Name	imagen
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.10 Field precio

2.1.2.3.3.10.1 precio Tree Diagram

{123} precio
       numeric

2.1.2.3.3.10.2 precio properties

PROPERTY	VALUE
Name	precio
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	decimal128
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.3.3.11 Field esPaquete

2.1.2.3.3.11.1 esPaquete Tree Diagram

{0/1}   esPaquete
                boolean

2.1.2.3.3.11.2 esPaquete properties

PROPERTY	VALUE
Name	esPaquete
Technical name	
Activated	true
Id	
Field-level encryption	
Type	boolean
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	false
Sample	
Comments	

2.1.2.3.3.12 Field productos

2.1.2.3.3.12.1 productos Tree Diagram

2.1.2.3.3.12.2 productos Hierarchy

Parent field: **producto**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0]	document	false			

2.1.2.3.3.12.3 productos properties

PROPERTY	VALUE
Name	productos
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	

PROPERTY	VALUE

PROPERTY	VALUE
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.3.3.13 Field [0]

2.1.2.3.3.13.1 [0] Tree Diagram
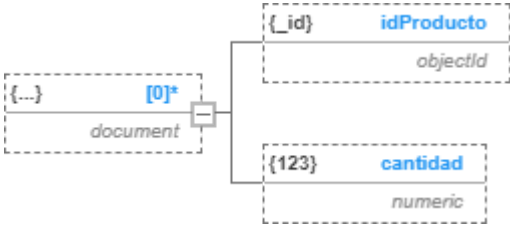
2.1.2.3.3.13.2 [0] Hierarchy

Parent field: **productos**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
idProducto	objectId	false			
cantidad	numeric	false			

2.1.2.3.3.13.3 [0] properties

PROPERTY	VALUE
Display name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.3.3.14 Field idProducto

2.1.2.3.3.14.1 idProducto Tree Diagram

2.1.2.3.3.14.2 idProducto properties

PROPERTY	VALUE
Name	idProducto
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Sample	
Comments	

2.1.2.3.3.15 Field cantidad

2.1.2.3.3.15.1 cantidad Tree Diagram

2.1.2.3.3.15.2 cantidad properties

PROPERTY	VALUE
Name	cantidad
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	integer64
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	

PROPERTY	VALUE

PROPERTY	VALUE
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.3.3.16 Field stock

2.1.2.3.3.16.1 stock Tree Diagram
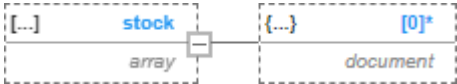
2.1.2.3.3.16.2 stock Hierarchy

Parent field: **producto**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0]	document	false			

2.1.2.3.3.16.3 stock properties

PROPERTY	VALUE
Name	stock
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.3.3.17 Field [0]

2.1.2.3.3.17.1 [0] Tree Diagram
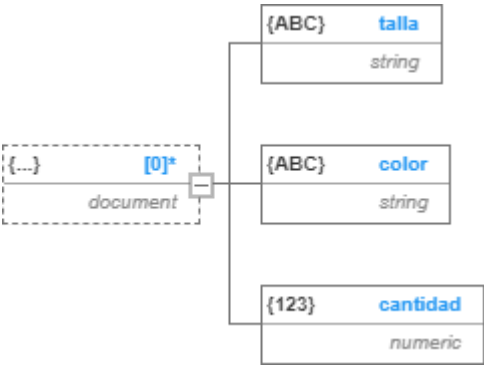
2.1.2.3.3.17.2 [0] Hierarchy

Parent field: **stock**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
talla	string	true			
color	string	true			
cantidad	numeric	true			

2.1.2.3.3.17.3 [0] properties

PROPERTY	VALUE
Display name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.3.3.18 Field talla

2.1.2.3.3.18.1 talla Tree Diagram

{ABC}   **talla**
          string

2.1.2.3.3.18.2 talla properties

PROPERTY	VALUE
Name	talla
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.19 Field color

2.1.2.3.3.19.1 color Tree Diagram

2.1.2.3.3.19.2 color properties

PROPERTY	VALUE
Name	color
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.20 Field cantidad

2.1.2.3.3.20.1 cantidad Tree Diagram

{123} **cantidad**
      numeric

2.1.2.3.3.20.2 cantidad properties

PROPERTY	VALUE
Name	cantidad
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	integer32
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.3.3.21 Field comentarios

2.1.2.3.3.21.1 comentarios Tree Diagram

2.1.2.3.3.21.2 comentarios Hierarchy

Parent field: **producto**
Child field(s):

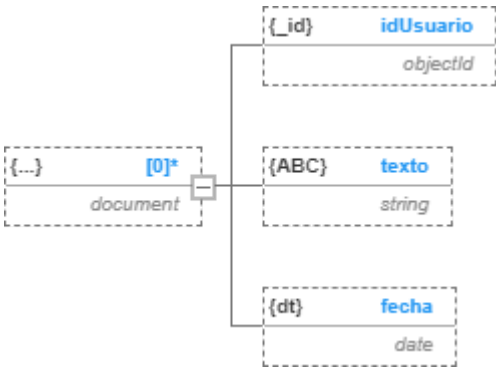| FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0]	document	false			

2.1.2.3.3.21.3 comentarios properties

PROPERTY	VALUE
Name	comentarios
Technical name	
Activated	true
Id	

PROPERTY	VALUE

PROPERTY	VALUE
Field-level encryption	
Type	array
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.3.3.22 Field [0]

2.1.2.3.3.22.1 [0] Tree Diagram

2.1.2.3.3.22.2 [0] Hierarchy

Parent field: **comentarios**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
idUsuario	objectId	false			
texto	string	false			
fecha	date	false			

2.1.2.3.3.22.3 [0] properties

PROPERTY	VALUE
Display name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.3.3.23 Field idUsuario

2.1.2.3.3.23.1 idUsuario Tree Diagram

2.1.2.3.3.23.2 idUsuario properties

PROPERTY	VALUE
Name	idUsuario
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	
Primary key	
Foreign collection	usuario
Foreign field	_id
Relationship type	Foreign Key
Relationship name	fk producto.comentarios.[0].idUsuario to usuario._id
Cardinality	1
Default	
Sample	
Comments	

2.1.2.3.3.24 Field texto

2.1.2.3.3.24.1 texto Tree Diagram

```
{ABC}      texto
           string
```

2.1.2.3.3.24.2 texto properties

PROPERTY	VALUE
Name	texto
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.3.3.25 Field fecha

2.1.2.3.3.25.1 fecha Tree Diagram

```
{dt}      fecha
          date
```

2.1.2.3.3.25.2 fecha properties

PROPERTY	VALUE
Name	fecha
Technical name	
Activated	true
Id	
Field-level encryption	
Type	date
Description	
Dependencies	

PROPERTY	VALUE
Name	fecha
Technical name	
Activated	true
Id	
Field-level encryption	

PROPERTY	VALUE
Required	
Primary key	false
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Now	true
Faker function	
Sample	
Comments	

2.1.2.3.4 producto JSON Schema

PROPERTY	VALUE
Required	
Primary key	false
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	

```json
{
    "$schema": "http://json-schema.org/draft-04/schema#",
    "type": "object",
    "title": "producto",
    "properties": {
        "_id": {
            "type": "string",
            "pattern": "^[a-fA-F0-9]{24}$"
        },
        "nombre": {
            "type": "string"
        },
        "categoria": {
            "type": "string"
        },
        "descripcion": {
            "type": "string"
        },
        "genero": {
            "type": "string",
            "enum": [
                "Hombre",
                "Mujer",
                "Unisex"
            ]
        },
        "imagenes": {
            "type": "array",
            "additionalItems": true,
            "items": {
                "type": "object",
                "properties": {
                    "diseno": {
                        "type": "string",
                        "enum": [
                            "Predeterminado",
                            "Personalizado"
                        ]
                    },
                    "imagen": {
                        "type": "string"
                    }
                },
                "additionalProperties": false
            }
        },
        "precio": {
            "type": "number"
        },
        "esPaquete": {
            "type": "boolean",
            "default": false
        },
        "productos": {
            "type": "array",
            "additionalItems": true,
            "items": {
                "type": "object",
                "properties": {
                    "idProducto": {
```

```
                    "type": "string",
                    "pattern": "^[a-fA-F0-9]{24}$"
                },
                "cantidad": {
                    "type": "integer"
                }
            },
            "additionalProperties": false
        }
    },
    "stock": {
        "type": "array",
        "additionalItems": true,
        "items": {
            "type": "object",
            "properties": {
                "talla": {
                    "type": "string"
                },
                "color": {
                    "type": "string"
                },
                "cantidad": {
                    "type": "integer"
                }
            },
            "additionalProperties": false,
            "required": [
                "talla",
                "color",
                "cantidad"
            ]
        }
    },
    "comentarios": {
        "type": "array",
        "additionalItems": true,
        "items": {
            "type": "object",
            "properties": {
                "idUsuario": {
                    "type": "string",
                    "pattern": "^[a-fA-F0-9]{24}$"
                },
                "texto": {
                    "type": "string"
                },
                "fecha": {
                    "type": "string",
                    "format": "date"
                }
            },
            "additionalProperties": false
        }
    }
},
"additionalProperties": false,
"required": [
    "nombre",
    "categoria",
    "genero",
```

```
      "precio"
   ]
}
```

2.1.2.3.5 producto JSON data

```
{
   "_id": ObjectId("ead7cec76bedf16d9e3bdb17"),
   "nombre": "Lorem",
   "categoria": "Lorem",
   "descripcion": "Lorem",
   "genero": "Hombre",
   "imagenes": [
      {
         "diseno": "Predeterminado",
         "imagen": "Lorem"
      }
   ],
   "precio": Decimal128("1.557877351499638e+49"),
   "esPaquete": false,
   "productos": [
      {
         "idProducto": ObjectId("cec7cf5da420cf465aeee4ef"),
         "cantidad": Long(-3355481148964802600)
      }
   ],
   "stock": [
      {
         "talla": "Lorem",
         "color": "Lorem",
         "cantidad": Int32(-986235010)
      }
   ],
   "comentarios": [
      {
         "idUsuario": ObjectId("acf8c1eedd901e0d8cc3dd85"),
         "texto": "Lorem",
         "fecha": ISODate("2016-04-08T15:06:21.595Z")
      }
   ]
}
```

2.1.2.3.6 producto Target Script

```
use ProyectoMongo;

db.createCollection("producto", {
    "capped": false,
    "validator": {
        "$jsonSchema": {
            "bsonType": "object",
            "title": "producto",
            "properties": {
                "_id": {
                    "bsonType": "objectId"
                },
                "nombre": {
                    "bsonType": "string"
                },
                "categoria": {
                    "bsonType": "string"
                },
                "descripcion": {
                    "bsonType": "string"
                },
                "genero": {
                    "bsonType": "string",
                    "enum": [
                        "Hombre",
                        "Mujer",
                        "Unisex"
                    ]
                },
                "imagenes": {
                    "bsonType": "array",
                    "additionalItems": true,
                    "items": {
                        "bsonType": "object",
                        "properties": {
                            "diseno": {
                                "bsonType": "string",
                                "enum": [
                                    "Predeterminado",
                                    "Personalizado"
                                ]
                            },
                            "imagen": {
                                "bsonType": "string"
                            }
                        },
                        "additionalProperties": false
                    }
                },
                "precio": {
                    "bsonType": "decimal"
                },
                "esPaquete": {
                    "bsonType": "bool"
                },
                "productos": {
                    "bsonType": "array",
                    "additionalItems": true,
                    "items": {
                        "bsonType": "object",
```

```
            "properties": {
              "idProducto": {
                "bsonType": "objectId"
              },
              "cantidad": {
                "bsonType": "long"
              }
            },
            "additionalProperties": false
          }
        },
        "stock": {
          "bsonType": "array",
          "additionalItems": true,
          "items": {
            "bsonType": "object",
            "properties": {
              "talla": {
                "bsonType": "string"
              },
              "color": {
                "bsonType": "string"
              },
              "cantidad": {
                "bsonType": "int"
              }
            },
            "additionalProperties": false,
            "required": [
              "talla",
              "color",
              "cantidad"
            ]
          }
        },
        "comentarios": {
          "bsonType": "array",
          "additionalItems": true,
          "items": {
            "bsonType": "object",
            "properties": {
              "idUsuario": {
                "bsonType": "objectId"
              },
              "texto": {
                "bsonType": "string"
              },
              "fecha": {
                "bsonType": "date"
              }
            },
            "additionalProperties": false
          }
        }
      },
      "additionalProperties": false,
      "required": [
        "nombre",
        "categoria",
        "genero",
        "precio"
```

```
          ]
      }
  },
  "validationLevel": "moderate",
  "validationAction": "warn"
});
```

2.1.2.4 Collection compra

2.1.2.4.1 compra Tree Diagram
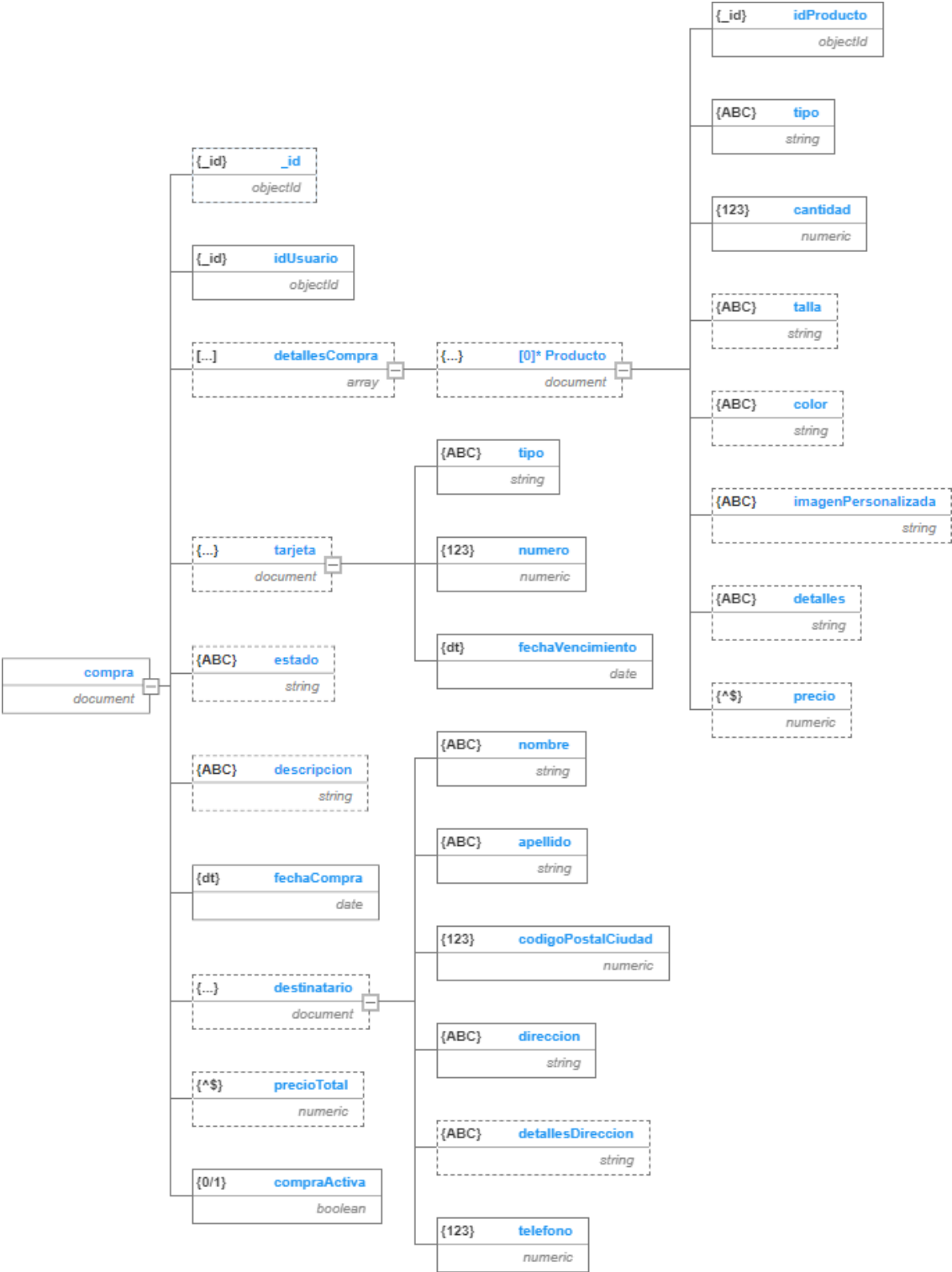
2.1.2.4.2 compra Properties

PROPERTY	VALUE
Collection name	compra
Technical name	
Activated	true
Id	
$ref	
Description	
Database	ProyectoMongo
Capped	
Time series	
Size	
Max	
Storage engine	WiredTiger
Config String	
Validation level	Moderate
Validation action	Warn
Encryption metadata	
Additional properties	false
Workload analysis	
[1] Actor	
Description	
Number of documents	
Avg document size (Bytes)	
Read-to-Write ratio	
Keep forever	
Retention (months)	
Write operations	
Read operations	
Comments	

2.1.2.4.3 compra Fields

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
_id	objectId	false	pk		
idUsuario	objectId	true	fk		
detallesCompra	array	false			
[0] Producto	document	false			
idProducto	objectId	true	fk		
tipo	string	true			
cantidad	integer64	true			
talla	string	false			
color	string	false			
imagenPersonalizada	string	false			
detalles	string	false			
precio	decimal128	false			
tarjeta	document	false			
tipo	string	true			
numero	integer64	true			
fechaVencimiento	date	true			
estado	string	false			
descripcion	string	false			
fechaCompra	date	true			
destinatario	document	false			
nombre	string	true			
apellido	string	true			
codigoPostalCiudad	numeric	true	fk		
direccion	string	true			
detallesDireccion	string	false			
telefono	numeric	true			
precioTotal	decimal128	false			
compraActiva	boolean	true			

2.1.2.4.3.1 Field _id

2.1.2.4.3.1.1 _id Tree Diagram

2.1.2.4.3.1.2 _id properties

PROPERTY	VALUE
Name	_id
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	false
Primary key	true
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Sample	
Comments	

2.1.2.4.3.2 Field idUsuario

2.1.2.4.3.2.1 idUsuario Tree Diagram

2.1.2.4.3.2.2 idUsuario properties

PROPERTY	VALUE
Name	idUsuario
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	usuario
Foreign field	_id
Relationship type	Foreign Key
Relationship name	fk compra.IdUsuario to usuario._id
Cardinality	0..n
Default	
Sample	
Comments	

2.1.2.4.3.3 Field detallesCompra

2.1.2.4.3.3.1 detallesCompra Tree Diagram

2.1.2.4.3.3.2 detallesCompra Hierarchy

Parent field: **compra**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0] Producto	document	false			

2.1.2.4.3.3.3 detallesCompra properties

PROPERTY	VALUE
Name	detallesCompra
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.4.3.4 Field [0] Producto

2.1.2.4.3.4.1 [0] Producto Tree Diagram
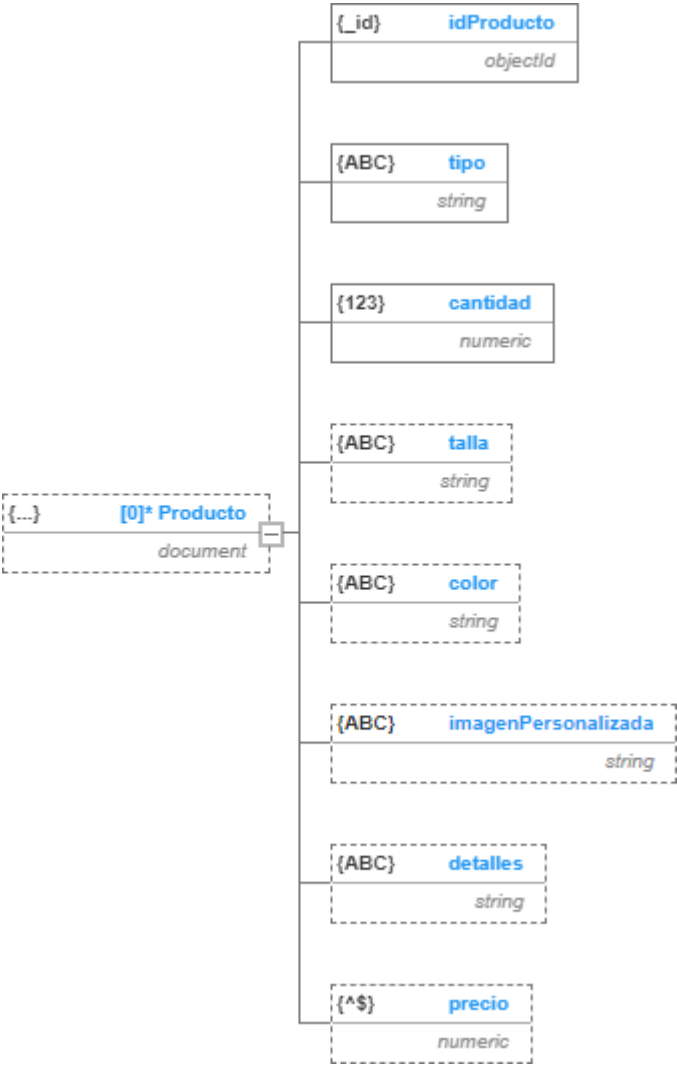
2.1.2.4.3.4.2 [0] Producto Hierarchy

Parent field: **detallesCompra**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
idProducto	objectId	true			
tipo	string	true			
cantidad	numeric	true			
talla	string	false			
color	string	false			
imagenPersonalizada	string	false			
detalles	string	false			
precio	numeric	false			

2.1.2.4.3.4.3 [0] Producto properties

PROPERTY	VALUE
Display name	Producto
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.4.3.5 Field idProducto

2.1.2.4.3.5.1 idProducto Tree Diagram

2.1.2.4.3.5.2 idProducto properties

PROPERTY	VALUE
Name	idProducto
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	producto
Foreign field	_id
Relationship type	Foreign Key
Relationship name	fk compra.detallesCompra.[0].idTipo to producto._id
Cardinality	n
Default	
Sample	
Comments	

2.1.2.4.3.6 Field tipo

2.1.2.4.3.6.1 tipo Tree Diagram

2.1.2.4.3.6.2 tipo properties

PROPERTY	VALUE
Name	tipo
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	Producto,Paquete
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.7 Field cantidad

2.1.2.4.3.7.1 cantidad Tree Diagram

2.1.2.4.3.7.2 cantidad properties

PROPERTY	VALUE
Name	cantidad
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	integer64
Description	

PROPERTY	VALUE
Name	cantidad

PROPERTY	VALUE
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.4.3.8 Field talla

2.1.2.4.3.8.1 talla Tree Diagram

2.1.2.4.3.8.2 talla properties

PROPERTY	VALUE
Name	talla
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	M,S,L,XL
Required	false
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.9 Field color

2.1.2.4.3.9.1 color Tree Diagram

2.1.2.4.3.9.2 color properties

PROPERTY	VALUE
Name	color
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	false
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.10 Field imagenPersonalizada

2.1.2.4.3.10.1 imagenPersonalizada Tree Diagram

```
{ABC}        imagenPersonalizada
                          string
```

2.1.2.4.3.10.2 imagenPersonalizada properties

PROPERTY	VALUE
Name	imagenPersonalizada
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.11 Field detalles

2.1.2.4.3.11.1 detalles Tree Diagram

2.1.2.4.3.11.2 detalles properties

PROPERTY	VALUE
Name	detalles
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.12 Field precio

2.1.2.4.3.12.1 precio Tree Diagram

{^$}   precio
            numeric

2.1.2.4.3.12.2 precio properties

PROPERTY	VALUE
Name	precio
Activated	true
Sample Name	
Id	
Field-level encryption	
Type	numeric
Subtype	decimal128
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.4.3.13 Field tarjeta

2.1.2.4.3.13.1 tarjeta Tree Diagram
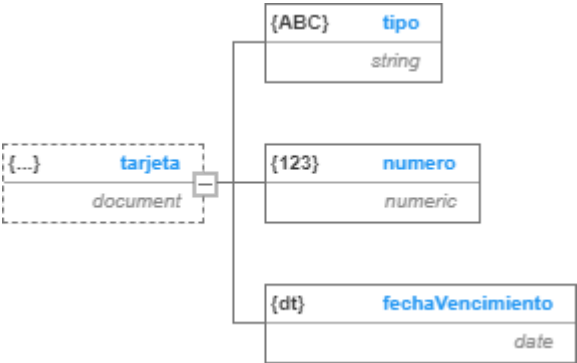
2.1.2.4.3.13.2 tarjeta Hierarchy

Parent field: **compra**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
tipo	string	true			
numero	numeric	true			
fechaVencimiento	date	true			

2.1.2.4.3.13.3 tarjeta properties

PROPERTY	VALUE
Name	tarjeta
Technical name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.4.3.14 Field tipo

2.1.2.4.3.14.1 tipo Tree Diagram

2.1.2.4.3.14.2 tipo properties

PROPERTY	VALUE
Name	tipo
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	Visa,Mastercard,Maestro
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.15 Field numero

2.1.2.4.3.15.1 numero Tree Diagram

{123}	numero
	numeric

2.1.2.4.3.15.2 numero properties

PROPERTY	VALUE
Name	numero
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	integer64
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.4.3.16 Field fechaVencimiento

2.1.2.4.3.16.1 fechaVencimiento Tree Diagram

2.1.2.4.3.16.2 fechaVencimiento properties

PROPERTY	VALUE
Name	fechaVencimiento
Technical name	
Activated	true
Id	
Field-level encryption	
Type	date
Description	
Dependencies	
Required	true
Primary key	false
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Now	
Faker function	
Sample	
Comments	

2.1.2.4.3.17 Field estado

2.1.2.4.3.17.1 estado Tree Diagram

2.1.2.4.3.17.2 estado properties

PROPERTY	VALUE
Name	estado
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	Pendiente,Completado,Enviado,Cancelado,Entregado
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.18 Field descripcion

2.1.2.4.3.18.1 descripcion Tree Diagram

2.1.2.4.3.18.2 descripcion properties

PROPERTY	VALUE
Name	descripcion
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.19 Field fechaCompra

2.1.2.4.3.19.1 fechaCompra Tree Diagram

{dt}	fechaCompra
	date

2.1.2.4.3.19.2 fechaCompra properties

PROPERTY	VALUE
Name	fechaCompra
Technical name	
Activated	true
Id	
Field-level encryption	
Type	date
Description	
Dependencies	
Required	true
Primary key	false
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Now	true
Faker function	
Sample	
Comments	

2.1.2.4.3.20 Field destinatario

2.1.2.4.3.20.1 destinatario Tree Diagram
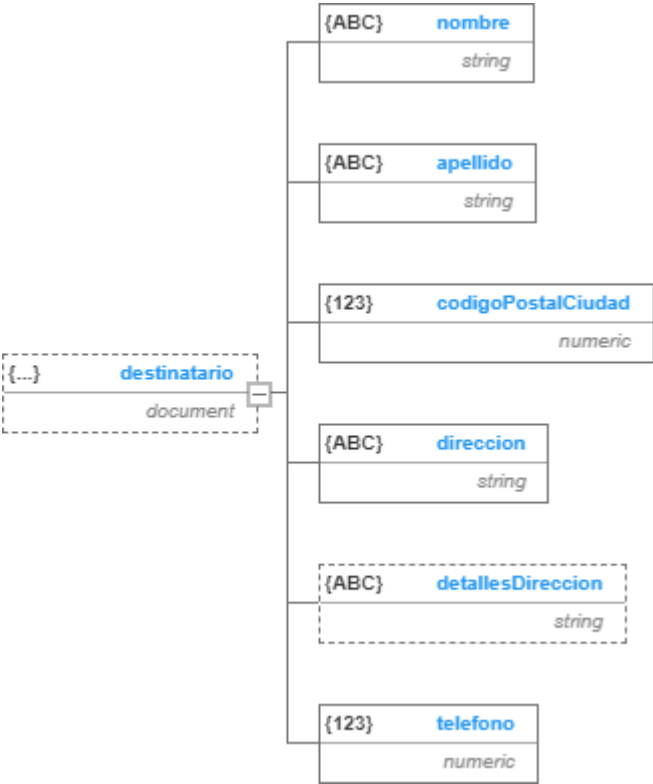
2.1.2.4.3.20.2 destinatario Hierarchy

Parent field: **compra**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
nombre	string	true			
apellido	string	true			
codigoPostalCiudad	numeric	true			
direccion	string	true			
detallesDireccion	string	false			
telefono	numeric	true			

2.1.2.4.3.20.3 destinatario properties

PROPERTY	VALUE
Name	destinatario
Technical name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.4.3.21 Field nombre

2.1.2.4.3.21.1 nombre Tree Diagram

{ABC}	nombre
	string

2.1.2.4.3.21.2 nombre properties

PROPERTY	VALUE
Name	nombre
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.22 Field apellido

2.1.2.4.3.22.1 apellido Tree Diagram

{ABC}   apellido
                string

2.1.2.4.3.22.2 apellido properties

PROPERTY	VALUE
Name	apellido
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.23 Field codigoPostalCiudad

2.1.2.4.3.23.1 codigoPostalCiudad Tree Diagram

2.1.2.4.3.23.2 codigoPostalCiudad properties

PROPERTY	VALUE
Name	codigoPostalCiudad
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	departamento
Foreign field	codigoPostal
Relationship type	Foreign Key
Relationship name	fk compra.destinatario.codigoPostalCiudad to departamento.ciudades.[0].codigoPostal
Cardinality	1..n
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.4.3.24 Field direccion

2.1.2.4.3.24.1 direccion Tree Diagram

2.1.2.4.3.24.2 direccion properties

PROPERTY	VALUE
Name	direccion
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	true
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.25 Field detallesDireccion

2.1.2.4.3.25.1 detallesDireccion Tree Diagram

2.1.2.4.3.25.2 detallesDireccion properties

PROPERTY	VALUE
Name	detallesDireccion
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.4.3.26 Field telefono

2.1.2.4.3.26.1 telefono Tree Diagram

{123}	telefono
	numeric

2.1.2.4.3.26.2 telefono properties

PROPERTY	VALUE
Name	telefono
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.4.3.27 Field precioTotal

2.1.2.4.3.27.1 precioTotal Tree Diagram

```
{^$}        precioTotal
              numeric
```

2.1.2.4.3.27.2 precioTotal properties

PROPERTY	VALUE
Name	precioTotal
Activated	true
Sample Name	
Id	
Field-level encryption	
Type	numeric
Subtype	decimal128
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.4.3.28 Field compraActiva

2.1.2.4.3.28.1 compraActiva Tree Diagram

{0/1}	compraActiva
	boolean

2.1.2.4.3.28.2 compraActiva properties

PROPERTY	VALUE
Name	compraActiva
Technical name	
Activated	true
Id	
Field-level encryption	
Type	boolean
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	false
Sample	
Comments	

2.1.2.4.4 compra JSON Schema

```
{
    "$schema": "http://json-schema.org/draft-04/schema#",
    "type": "object",
    "title": "compra",
    "properties": {
        "_id": {
            "type": "string",
            "pattern": "^[a-fA-F0-9]{24}$"
        },
        "idUsuario": {
            "type": "string",
            "pattern": "^[a-fA-F0-9]{24}$"
        },
        "detallesCompra": {
            "type": "array",
            "additionalItems": true,
            "items": {
                "type": "object",
                "properties": {
                    "idProducto": {
                        "type": "string",
                        "pattern": "^[a-fA-F0-9]{24}$"
                    },
                    "tipo": {
                        "type": "string",
                        "enum": [
                            "Producto",
                            "Paquete"
                        ]
                    },
                    "cantidad": {
                        "type": "integer"
                    },
                    "talla": {
                        "type": "string",
                        "enum": [
                            "M",
                            "S",
                            "L",
                            "XL"
                        ]
                    },
                    "color": {
                        "type": "string"
                    },
                    "imagenPersonalizada": {
                        "type": "string"
                    },
                    "detalles": {
                        "type": "string"
                    }
                },
                "additionalProperties": false,
                "patternProperties": {
                    "precio": {
                        "type": "number"
                    }
                },
                "required": [
                    "idProducto",
```

```
                "tipo",
                "cantidad"
            ]
        }
    },
    "tarjeta": {
        "type": "object",
        "properties": {
            "tipo": {
                "type": "string",
                "enum": [
                    "Visa",
                    "Mastercard",
                    "Maestro"
                ]
            },
            "numero": {
                "type": "integer"
            },
            "fechaVencimiento": {
                "type": "string",
                "format": "date"
            }
        },
        "additionalProperties": false,
        "required": [
            "tipo",
            "numero",
            "fechaVencimiento"
        ]
    },
    "estado": {
        "type": "string",
        "enum": [
            "Pendiente",
            "Completado",
            "Enviado",
            "Cancelado",
            "Entregado"
        ]
    },
    "descripcion": {
        "type": "string"
    },
    "fechaCompra": {
        "type": "string",
        "format": "date"
    },
    "destinatario": {
        "type": "object",
        "properties": {
            "nombre": {
                "type": "string"
            },
            "apellido": {
                "type": "string"
            },
            "codigoPostalCiudad": {
                "type": "number"
            },
            "direccion": {
```

```
                    "type": "string"
                },
                "detallesDireccion": {
                    "type": "string"
                },
                "telefono": {
                    "type": "number"
                }
            },
            "additionalProperties": false,
            "required": [
                "nombre",
                "apellido",
                "codigoPostalCiudad",
                "direccion",
                "telefono"
            ]
        },
        "compraActiva": {
            "type": "boolean",
            "default": false
        }
    },
    "additionalProperties": false,
    "patternProperties": {
        "precioTotal": {
            "type": "number"
        }
    },
    "required": [
        "idUsuario",
        "fechaCompra",
        "compraActiva"
    ]
}
```

2.1.2.4.5 compra JSON data

```
{
    "_id": ObjectId("c1cdf42c7c09f2bddfba7d20"),
    "idUsuario": ObjectId("7ef9acce62aa7de3fe1ccec4"),
    "detallesCompra": [
        {
            "idProducto": ObjectId("dc2f5e5dbdb95c720afaec52"),
            "tipo": "Producto",
            "cantidad": Long(3064894699715735600),
            "talla": "M",
            "color": "Lorem",
            "imagenPersonalizada": "Lorem",
            "detalles": "Lorem",
            "precio": Decimal128("-1.4986305436835072e+50")
        }
    ],
    "tarjeta": {
        "tipo": "Visa",
        "numero": Long(-4782938312084056000),
        "fechaVencimiento": ISODate("2016-04-08T15:06:21.595Z")
    },
    "estado": "Pendiente",
    "descripcion": "Lorem",
    "fechaCompra": ISODate("2016-04-08T15:06:21.595Z"),
    "destinatario": {
        "nombre": "Lorem",
        "apellido": "Lorem",
        "codigoPostalCiudad": -20,
        "direccion": "Lorem",
        "detallesDireccion": "Lorem",
        "telefono": 26
    },
    "precioTotal": Decimal128("-4.396739141319828e+48"),
    "compraActiva": false
}
```

2.1.2.4.6 compra Target Script

```
use ProyectoMongo;

db.createCollection("compra", {
    "capped": false,
    "validator": {
        "$jsonSchema": {
            "bsonType": "object",
            "title": "compra",
            "properties": {
                "_id": {
                    "bsonType": "objectId"
                },
                "idUsuario": {
                    "bsonType": "objectId"
                },
                "detallesCompra": {
                    "bsonType": "array",
                    "additionalItems": true,
                    "items": {
                        "bsonType": "object",
                        "properties": {
                            "idProducto": {
                                "bsonType": "objectId"
                            },
                            "tipo": {
                                "bsonType": "string",
                                "enum": [
                                    "Producto",
                                    "Paquete"
                                ]
                            },
                            "cantidad": {
                                "bsonType": "long"
                            },
                            "talla": {
                                "bsonType": "string",
                                "enum": [
                                    "M",
                                    "S",
                                    "L",
                                    "XL"
                                ]
                            },
                            "color": {
                                "bsonType": "string"
                            },
                            "imagenPersonalizada": {
                                "bsonType": "string"
                            },
                            "detalles": {
                                "bsonType": "string"
                            }
                        },
                        "additionalProperties": false,
                        "patternProperties": {
                            "precio": {
                                "bsonType": "decimal"
                            }
                        },
                        "required": [
```

```
                    "idProducto",
                    "tipo",
                    "cantidad"
                ]
            }
        },
        "tarjeta": {
            "bsonType": "object",
            "properties": {
                "tipo": {
                    "bsonType": "string",
                    "enum": [
                        "Visa",
                        "Mastercard",
                        "Maestro"
                    ]
                },
                "numero": {
                    "bsonType": "long"
                },
                "fechaVencimiento": {
                    "bsonType": "date"
                }
            },
            "additionalProperties": false,
            "required": [
                "tipo",
                "numero",
                "fechaVencimiento"
            ]
        },
        "estado": {
            "bsonType": "string",
            "enum": [
                "Pendiente",
                "Completado",
                "Enviado",
                "Cancelado",
                "Entregado"
            ]
        },
        "descripcion": {
            "bsonType": "string"
        },
        "fechaCompra": {
            "bsonType": "date"
        },
        "destinatario": {
            "bsonType": "object",
            "properties": {
                "nombre": {
                    "bsonType": "string"
                },
                "apellido": {
                    "bsonType": "string"
                },
                "codigoPostalCiudad": {
                    "bsonType": "number"
                },
                "direccion": {
                    "bsonType": "string"
```

```
          },
          "detallesDireccion": {
             "bsonType": "string"
          },
          "telefono": {
             "bsonType": "number"
          }
        },
        "additionalProperties": false,
        "required": [
          "nombre",
          "apellido",
          "codigoPostalCiudad",
          "direccion",
          "telefono"
        ]
      },
      "compraActiva": {
        "bsonType": "bool"
      }
    },
    "additionalProperties": false,
    "patternProperties": {
      "precioTotal": {
        "bsonType": "decimal"
      }
    },
    "required": [
      "idUsuario",
      "fechaCompra",
      "compraActiva"
    ]
  }
},
"validationLevel": "moderate",
"validationAction": "warn"
});
```

2.1.2.5 Collection promociones

2.1.2.5.1 promociones Tree Diagram
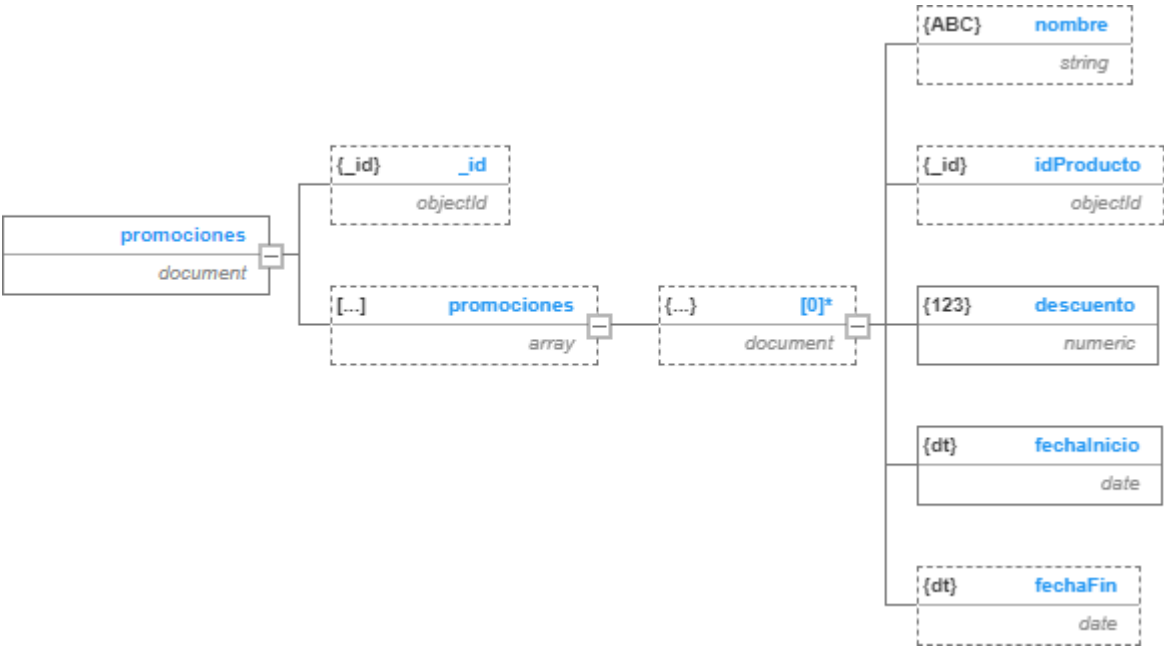
2.1.2.5.2 promociones Properties

PROPERTY	VALUE
Collection name	promociones
Technical name	
Activated	true
Id	
$ref	
Description	
Database	ProyectoMongo
Capped	
Time series	
Size	
Max	
Storage engine	WiredTiger
Config String	
Validation level	Moderate
Validation action	Warn
Encryption metadata	
Additional properties	false
Workload analysis	
[1] Actor	
Description	
Number of documents	
Avg document size (Bytes)	
Read-to-Write ratio	
Keep forever	
Retention (months)	
Write operations	
Read operations	
Comments	

2.1.2.5.3 promociones Fields

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
_id	objectId	false			
promociones	array	false			
[0]	document	false			
nombre	string	false			
idProducto	objectId	false	fk		
descuento	numeric	true			
fechaInicio	date	true			
fechaFin	date	false			

2.1.2.5.3.1 Field _id

2.1.2.5.3.1.1 _id Tree Diagram

```
{_id}          _id
        objectId
```

2.1.2.5.3.1.2 _id properties

PROPERTY	VALUE
Name	_id
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Sample	
Comments	

2.1.2.5.3.2 Field promociones

2.1.2.5.3.2.1 promociones Tree Diagram

2.1.2.5.3.2.2 promociones Hierarchy

Parent field: **promociones**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
[0]	document	false			

2.1.2.5.3.2.3 promociones properties

PROPERTY	VALUE
Name	promociones
Technical name	
Activated	true
Id	
Field-level encryption	
Type	array
Description	
Dependencies	
Required	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	

PROPERTY	VALUE

PROPERTY	VALUE
Cardinality	
Min items	
Max items	
Unique items	
Additional items	true
Quantification	
Comments	

2.1.2.5.3.3 Field [0]

2.1.2.5.3.3.1 [0] Tree Diagram
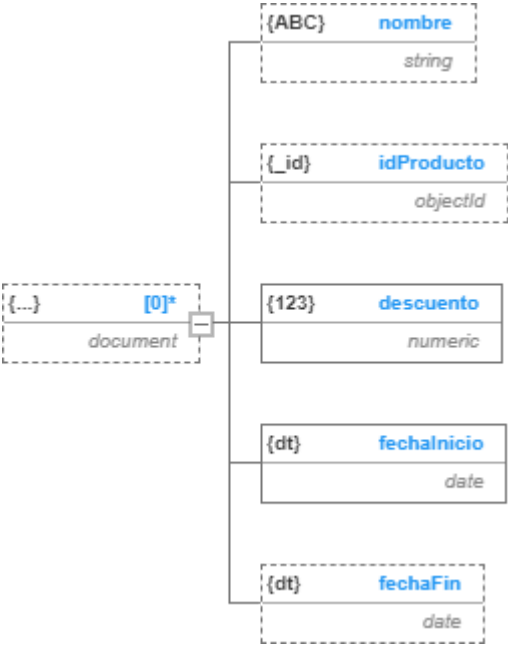
2.1.2.5.3.3.2 [0] Hierarchy

Parent field: **promociones**
Child field(s):

FIELD	TYPE	REQ	KEY	DESCRIPTION	COMMENTS
nombre	string	false			
idProducto	objectId	false			
descuento	numeric	true			
fechaInicio	date	true			
fechaFin	date	false			

2.1.2.5.3.3.3 [0] properties

PROPERTY	VALUE
Display name	
Activated	true
Id	
Field-level encryption	
Type	document
Description	
Dependencies	
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
DBRef	
Min Properties	
Max Properties	
Additional properties	false
Comments	

2.1.2.5.3.4 Field nombre

2.1.2.5.3.4.1 nombre Tree Diagram

2.1.2.5.3.4.2 nombre properties

PROPERTY	VALUE
Name	nombre
Technical name	
Activated	true
Id	
Field-level encryption	
Type	string
Description	
Format	
Pattern	
Min length	
Max length	
Default	
Enum	
Required	
Primary key	
Dependencies	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Faker function	
Sample	
Comments	

2.1.2.5.3.5 Field idProducto

2.1.2.5.3.5.1 idProducto Tree Diagram

2.1.2.5.3.5.2 idProducto properties

PROPERTY	VALUE
Name	idProducto
Technical name	
Activated	true
Id	
Field-level encryption	
Type	objectId
Description	
Dependencies	
Required	false
Primary key	
Foreign collection	producto
Foreign field	_id
Relationship type	Foreign Key
Relationship name	fk promociones.promociones.[0].IdProducto to producto._id
Cardinality	n
Default	
Sample	
Comments	

2.1.2.5.3.6 Field descuento

2.1.2.5.3.6.1 descuento Tree Diagram

2.1.2.5.3.6.2 descuento properties

PROPERTY	VALUE
Name	descuento
Technical name	
Activated	true
Id	
Field-level encryption	
Type	numeric
Subtype	
Description	
Dependencies	
Required	true
Primary key	
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Unit	
Min value	
Excl min	
Max value	
Excl max	
Multiple of	
Divisible by	
Enum	
Faker function	
Sample	
Comments	

2.1.2.5.3.7 Field fechaInicio

2.1.2.5.3.7.1 fechaInicio Tree Diagram

{dt}	fechaInicio
	date

2.1.2.5.3.7.2 fechaInicio properties

PROPERTY	VALUE
Name	fechaInicio
Technical name	
Activated	true
Id	
Field-level encryption	
Type	date
Description	
Dependencies	
Required	true
Primary key	false
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Now	
Faker function	
Sample	
Comments	

2.1.2.5.3.8 Field fechaFin

2.1.2.5.3.8.1 fechaFin Tree Diagram

2.1.2.5.3.8.2 fechaFin properties

PROPERTY	VALUE
Name	fechaFin
Technical name	
Activated	true
Id	
Field-level encryption	
Type	date
Description	
Dependencies	
Required	
Primary key	false
Foreign collection	
Foreign field	
Relationship type	
Relationship name	
Cardinality	
Default	
Now	
Faker function	
Sample	
Comments	

2.1.2.5.4 promociones JSON Schema

```
{
    "$schema": "http://json-schema.org/draft-04/schema#",
    "type": "object",
    "title": "promociones",
    "properties": {
        "_id": {
            "type": "string",
            "pattern": "^[a-fA-F0-9]{24}$"
        },
        "promociones": {
            "type": "array",
            "additionalItems": true,
            "items": {
                "type": "object",
                "properties": {
                    "nombre": {
                        "type": "string"
                    },
                    "idProducto": {
                        "type": "string",
                        "pattern": "^[a-fA-F0-9]{24}$"
                    },
                    "descuento": {
                        "type": "number"
                    },
                    "fechaInicio": {
                        "type": "string",
                        "format": "date"
                    },
                    "fechaFin": {
                        "type": "string",
                        "format": "date"
                    }
                },
                "additionalProperties": false,
                "required": [
                    "descuento",
                    "fechaInicio"
                ]
            }
        }
    },
    "additionalProperties": false
}
```

2.1.2.5.5 promociones JSON data

```
{
    "_id": ObjectId("cd71d89ecc95e19d04588868"),
    "promociones": [
        {
            "nombre": "Lorem",
            "idProducto": ObjectId("fd5112e07cf4d2f7f3fa7b8e"),
            "descuento": 65,
            "fechaInicio": ISODate("2016-04-08T15:06:21.595Z"),
            "fechaFin": ISODate("2016-04-08T15:06:21.595Z")
        }
    ]
}
```

### 2.1.2.5.6 promociones Target Script

```
use ProyectoMongo;

db.createCollection("promociones", {
    "capped": false,
    "validator": {
        "$jsonSchema": {
            "bsonType": "object",
            "title": "promociones",
            "properties": {
                "_id": {
                    "bsonType": "objectId"
                },
                "promociones": {
                    "bsonType": "array",
                    "additionalItems": true,
                    "items": {
                        "bsonType": "object",
                        "properties": {
                            "nombre": {
                                "bsonType": "string"
                            },
                            "idProducto": {
                                "bsonType": "objectId"
                            },
                            "descuento": {
                                "bsonType": "number"
                            },
                            "fechaInicio": {
                                "bsonType": "date"
                            },
                            "fechaFin": {
                                "bsonType": "date"
                            }
                        },
                        "additionalProperties": false,
                        "required": [
                            "descuento",
                            "fechaInicio"
                        ]
                    }
                }
            },
            "additionalProperties": false
        }
    },
    "validationLevel": "moderate",
    "validationAction": "warn"
});
```

3. RELATIONSHIPS

3.1 Relationship fk compra.IdUsuario to usuario._id

3.1.1 fk compra.IdUsuario to usuario._id Diagram

PARENT TABLE	PARENT FIELD
usuario	_id

CHILD TABLE	CHILD FIELD
compra	idUsuario
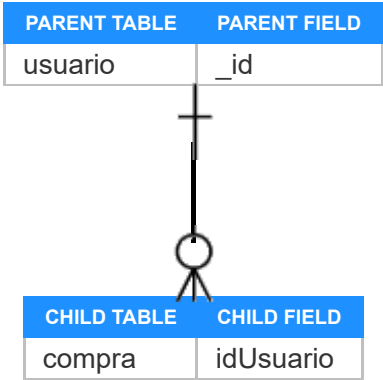
3.1.2 fk compra.IdUsuario to usuario._id Properties

PROPERTY	VALUE
Name	fk compra.IdUsuario to usuario._id
Description	
Parent Collection	usuario
Parent field	_id
Parent Cardinality	1
Child Collection	compra
Child field	idUsuario
Child Cardinality	0..n
Comments	

3.2 Relationship fk producto.comentarios.[0].idUsuario to usuario._id

### 3.2.1 fk producto.comentarios.[0].idUsuario to usuario._id Diagram

PARENT TABLE	PARENT FIELD
usuario	_id

CHILD TABLE	CHILD FIELD
producto	comentarios.[-1].idUsuario
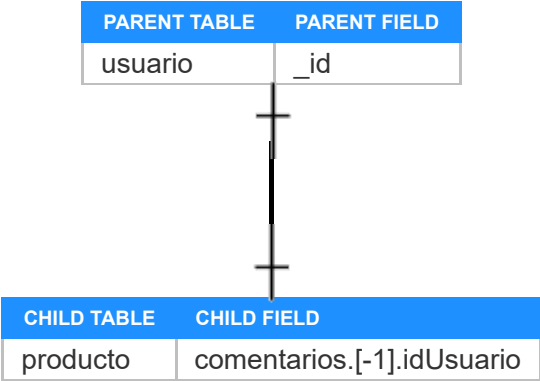
3.2.2 fk producto.comentarios.[0].idUsuario to usuario._id Properties

PROPERTY	VALUE
Name	fk producto.comentarios.[0].idUsuario to usuario._id
Description	
Parent Collection	usuario
Parent field	_id
Parent Cardinality	1
Child Collection	producto
Child field	idUsuario
Child Cardinality	1
Comments	

3.3 Relationship fk promociones.promociones.[0].IdProducto to producto._id

## 3.3.1 fk promociones.promociones.[0].IdProducto to producto._id Diagram

PARENT TABLE	PARENT FIELD
producto	_id

CHILD TABLE	CHILD FIELD
promociones	promociones.[-1].idProducto
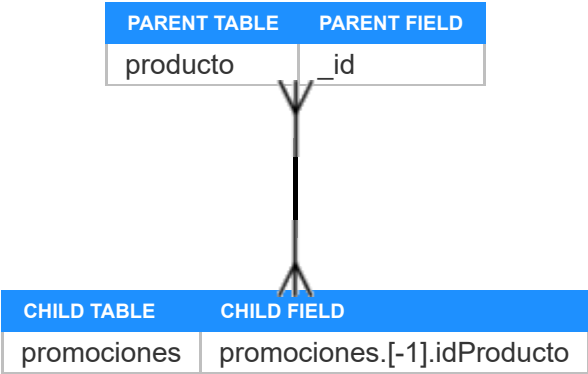
3.3.2 fk promociones.promociones.[0].IdProducto to producto._id Properties

PROPERTY	VALUE
Name	fk promociones.promociones.[0].IdProducto to producto._id
Description	
Parent Collection	producto
Parent field	_id
Parent Cardinality	n
Child Collection	promociones
Child field	idProducto
Child Cardinality	n
Comments	

3.4 Relationship
fk departamento.ciudades.[0].codigoPostal to usuario.direcciones.[0].codigoPostalCiudad

3.4.1 fk departamento.ciudades.[0].codigoPostal to usuario.direcciones.[0].codigoPostalCiudad Diagram

PARENT TABLE	PARENT FIELD
usuario	direcciones.[-1].codigoPostalCiudad

CHILD TABLE	CHILD FIELD
departamento	ciudades.[-1].codigoPostal
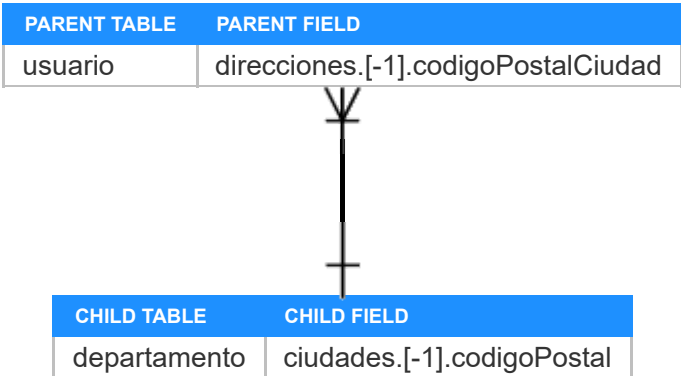
3.4.2 fk departamento.ciudades.[0].codigoPostal to usuario.direcciones.[0].codigoPostalCiudad Properties

PROPERTY	VALUE
Name	fk departamento.ciudades.[0].codigoPostal to usuario.direcciones.[0].codigoPostalCiudad
Description	
Parent Collection	usuario
Parent field	codigoPostalCiudad
Parent Cardinality	1..n
Child Collection	departamento
Child field	codigoPostal
Child Cardinality	1
Comments	

3.5 Relationship fk compra.destinatario.codigoPostalCiudad to departamento.ciudades.[0].codigoPostal

3.5.1 fk compra.destinatario.codigoPostalCiudad to departamento.ciudades.[0].codigoPostal Diagram

PARENT TABLE	PARENT FIELD
departamento	ciudades.[-1].codigoPostal

CHILD TABLE	CHILD FIELD
compra	destinatario.codigoPostalCiudad
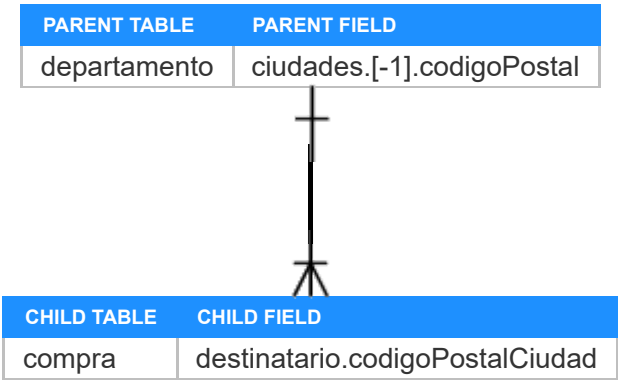
3.5.2 fk compra.destinatario.codigoPostalCiudad to departamento.ciudades.[0].codigoPostal Properties

PROPERTY	VALUE
Name	fk compra.destinatario.codigoPostalCiudad to departamento.ciudades.[0].codigoPostal
Description	
Parent Collection	departamento
Parent field	codigoPostal
Parent Cardinality	1
Child Collection	compra
Child field	codigoPostalCiudad
Child Cardinality	1..n
Comments	

3.6 Relationship fk compra.detallesCompra.[0].idTipo to producto._id

3.6.1 fk compra.detallesCompra.[0].idTipo to producto._id Diagram

PARENT TABLE	PARENT FIELD
producto	_id

CHILD TABLE	CHILD FIELD
compra	detallesCompra.[-1].idProducto
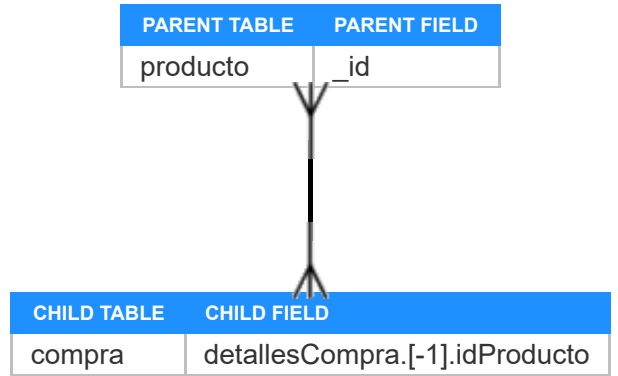
3.6.2 fk compra.detallesCompra.[0].idTipo to producto._id Properties

PROPERTY	VALUE
Name	fk compra.detallesCompra.[0].idTipo to producto._id
Description	
Parent Collection	producto
Parent field	_id
Parent Cardinality	n
Child Collection	compra
Child field	idProducto
Child Cardinality	n
Comments	