

# TUGAS BASIS DATA LANJUT

## MEMBUAT DATABASE ONE TO MANY DAN MANY TO MANY

### DENGAN MONGODB

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Melakukan koneksi ke server dengan perintah “mongodb”

```
Command Prompt - mongod
C:\> cd program files /mongodb /server /3.2

C:\Program Files\MongoDB\Server\3.2>cd bin

C:\Program Files\MongoDB\Server\3.2\bin>mongod
2019-02-27T18:38:24.993+0700 I CONTROL [main]
2019-02-27T18:38:24.993+0700 W CONTROL [main] 32-bit servers don't have journaling enabled by default. Please use --journal if you want durability.
2019-02-27T18:38:25.022+0700 I CONTROL [initandlisten] MongoDB starting : pid=6988 port=27017 dbpath=C:\data\db\ 32-bit host=DESKTOP-E4966LT
2019-02-27T18:38:25.022+0700 I CONTROL [initandlisten] targetMinOS: Windows Vista/Windows Server 2008
2019-02-27T18:38:25.022+0700 I CONTROL [initandlisten] db version v3.2.14
2019-02-27T18:38:25.022+0700 I CONTROL [initandlisten] git version: 92f6668a768ebf294bd4f494c50f48459198e6a3
2019-02-27T18:38:25.023+0700 I CONTROL [initandlisten] allocator: tcmalloc
2019-02-27T18:38:25.023+0700 I CONTROL [initandlisten] modules: none
2019-02-27T18:38:25.025+0700 I CONTROL [initandlisten] build environment:
2019-02-27T18:38:25.028+0700 I CONTROL [initandlisten] distarch: i386
2019-02-27T18:38:25.029+0700 I CONTROL [initandlisten] target_arch: i386
2019-02-27T18:38:25.031+0700 I CONTROL [initandlisten] options: {}
2019-02-27T18:38:25.037+0700 I - [initandlisten] Detected data files in C:\data\db\ created by the 'mmapv1' storage engine, so setting the active storage engine to 'mmapv1'.
2019-02-27T18:38:25.089+0700 I CONTROL [initandlisten]
2019-02-27T18:38:25.089+0700 I CONTROL [initandlisten] ** WARNING: This 32-bit MongoDB binary is deprecated
2019-02-27T18:38:25.090+0700 I CONTROL [initandlisten]
2019-02-27T18:38:25.092+0700 I CONTROL [initandlisten]
2019-02-27T18:38:25.094+0700 I CONTROL [initandlisten] ** NOTE: This is a 32 bit MongoDB binary.
2019-02-27T18:38:25.096+0700 I CONTROL [initandlisten] ** 32 bit builds are limited to less than 2GB of data (or less with --journal).
2019-02-27T18:38:25.098+0700 I CONTROL [initandlisten] ** Note that journaling defaults to off for 32 bit and is currently off.
2019-02-27T18:38:25.101+0700 I CONTROL [initandlisten] ** See http://dochub.mongodb.org/core/32bit
2019-02-27T18:38:25.102+0700 I CONTROL [initandlisten]
2019-02-27T18:38:25.154+0700 I NETWORK [HostnameCanonicalizationWorker] Starting hostname canonicalization worker
2019-02-27T18:38:25.538+0700 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:\data\db\diagnostic.data'
2019-02-27T18:38:25.539+0700 I NETWORK [initandlisten] waiting for connections on port 27017
2019-02-27T18:40:22.768+0700 I NETWORK [initandlisten] connection accepted from 127.0.0.1:59664 #1 (1 connection now open)
2019-02-27T19:31:19.616+0700 I NETWORK [initandlisten] connection accepted from 127.0.0.1:60587 #2 (2 connections now open)
```

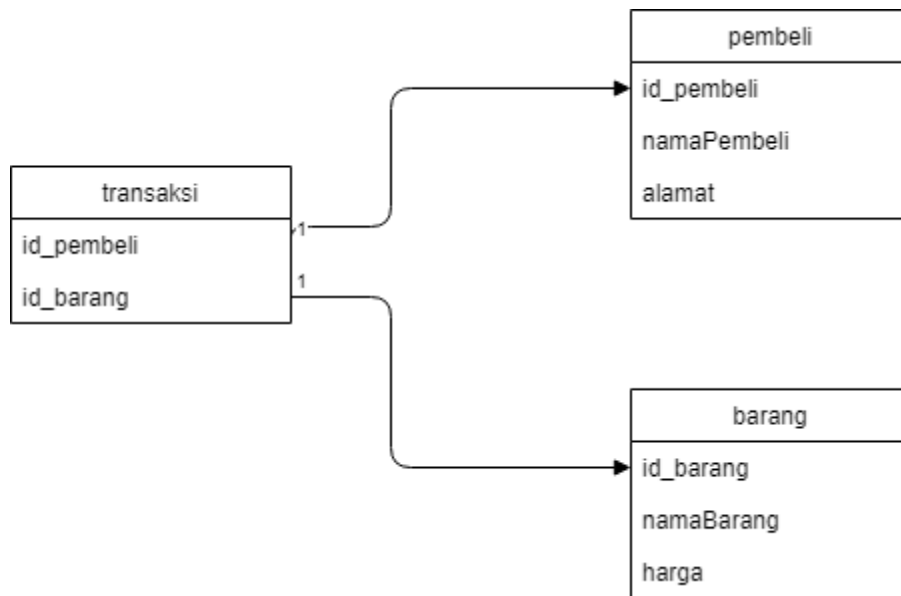
Membuka jendela baru dan mengetik perintah “mongo” untuk mulai membuat database

```
CA mongo
C:\Program Files\MongoDB\Server\3.2\bin>mongo
MongoDB shell version: 3.2.14
connecting to: test
Server has startup warnings:
2019-02-27T18:38:25.089+0700 I CONTROL [initandlisten]
2019-02-27T18:38:25.089+0700 I CONTROL [initandlisten] ** WARNING: This 32-bit MongoDB binary is deprecated
2019-02-27T18:38:25.090+0700 I CONTROL [initandlisten]
2019-02-27T18:38:25.092+0700 I CONTROL [initandlisten]
2019-02-27T18:38:25.094+0700 I CONTROL [initandlisten] ** NOTE: This is a 32 bit MongoDB binary.
2019-02-27T18:38:25.096+0700 I CONTROL [initandlisten] ** 32 bit builds are limited to less than 2GB
2019-02-27T18:38:25.098+0700 I CONTROL [initandlisten] ** Note that journaling defaults to off for 32
2019-02-27T18:38:25.101+0700 I CONTROL [initandlisten] ** See http://dochub.mongodb.org/core/32bit
2019-02-27T18:38:25.102+0700 I CONTROL [initandlisten]
> show dbs
local 0.078GB
```

Melihat database awal

```
2019-02-27T18:38:25
> show dbs
local 0.078GB
```

## MANY TO MANY



Membuat database baru dengan nama “oneToMany”

```
> use oneToMany
switched to db oneToMany
```

Membuat collection dengan nama “barang” di dalam database “oneToMany”

Serta langsung meng insert field data kedalamnya

```
> db.barang.insert({namaBarang:"baju", harga:"120000" })
WriteResult({ "nInserted" : 1 })
```

Membuat collection dengan nama “pembeli” di dalam database “oneToMany”

Serta langsung meng insert field data kedalamnya

```
> db.pembeli.insert({nama:"ahmad",alamat:"ketintang jaya"})
WriteResult({ "nInserted" : 1 })
```

Melihat collection yang telah dibuat

```
> show collections
barang
pembeli
system.indexes
```

Menampilkan isi field dari collection “barang” yang telah di masukkan.

```
> db.barang.find().pretty()
{
  "_id" : ObjectId("5c769518d6c1ca2d6a672bce"),
  "namaBarang" : "baju",
  "harga" : "120000"
}
{
  "_id" : ObjectId("5c769fc4d6c1ca2d6a672bd1"),
  "namaBarang" : "celana",
  "harga" : "100000"
}
{
  "_id" : ObjectId("5c769fdad6c1ca2d6a672bd2"),
  "namaBarang" : "sandal",
  "harga" : "50000"
}
>
```

Menampilkan isi field dari collection “pembeli” yang telah di masukkan.

```
> db.pembeli.find().pretty()
{
  "_id" : ObjectId("5c769440d6c1ca2d6a672bcd"),
  "nama" : "ahmad",
  "alamat" : "ketintang jaya"
}
{
  "_id" : ObjectId("5c76a02dd6c1ca2d6a672bd3"),
  "nama" : "subagjo",
  "alamat" : "ketintang selatan"
}
{
  "_id" : ObjectId("5c76a040d6c1ca2d6a672bd4"),
  "nama" : "rohman",
  "alamat" : "ketintang barat"
}
>
```

Membuat collection bernama “transaksi dengan field dengan nama “id\_pembeli” yang direlasikan dengan “\_id” yang ada di collection “pembeli” dengan mengisi indeks array dari data yang ingin direlasikan.

```

}
> db.transaksi.insert({id_pembeli: db.pembeli.find()[0]._id, id_barang: db.barang.find()[0]._id})
WriteResult({ "nInserted" : 1 })
> db.transaksi.find().pretty()
{
  "_id" : ObjectId("5c7699e8d6c1ca2d6a672bcf"),
  "id_pembeli" : ObjectId("5c769440d6c1ca2d6a672bcd"),
  "id_barang" : ObjectId("5c769518d6c1ca2d6a672bce")
}

```

Collection “transaksi” yang berhasil dibuat dengan merelasikan “id\_pembeli” dan “id\_barang” dari collection sebelumnya.

```

> db.transaksi.find().pretty()
{
  "_id" : ObjectId("5c7699e8d6c1ca2d6a672bcf"),
  "id_pembeli" : ObjectId("5c769440d6c1ca2d6a672bcd"),
  "id_barang" : ObjectId("5c769518d6c1ca2d6a672bce")
}

```

## ONE TO MANY

membuat database sewakamera.

Membuat collection bernama “kamera” dan mengisi datanya

```

> use sewaKamera
switched to db sewaKamera
> db.kamera.insert({jenis:"DSLR",merk:"canon",tipe:"EOS70D",harga:"110000"})
WriteResult({ "nInserted" : 1 })
> db.kamera.find().pretty()
{
  "_id" : ObjectId("5c76b90fd6c1ca2d6a672bd5"),
  "jenis" : "DSLR",
  "merk" : "canon",
  "tipe" : "EOS70D",
  "harga" : "110000"
}

```

membuat collection dengan nama “peminjaman” serta mengisi datanya merelaskannya dengan “\_id” dari collection “kamera”.

```
> db.peminjaman.insert({nama:"nurhadi",alamat:"bogor",telepon:"0897654321", kamera_id: db.kamera.find()[0]._id})
WriteResult({ "nInserted" : 1 })
> db.peminjaman.find().pretty()
{
  "_id" : ObjectId("5c76ba62d6c1ca2d6a672bd6"),
  "nama" : "nurhadi",
  "alamat" : "bogor",
  "telepon" : "0897654321",
  "kamera_id" : ObjectId("5c76b90fd6c1ca2d6a672bd5")
}
> db.kamera.find().pretty()
{
  "_id" : ObjectId("5c76b90fd6c1ca2d6a672bd5"),
  "jenis" : "DSLR",
  "merk" : "canon",
  "tipe" : "EOS70D",
  "harga" : "110000"
```