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Prodi : D3 Manajemen Informatika

Matkul : Basis Data Lanjut

A. ONE TO MANY

1. Membuat database onetomany dan membuat collections

➔ use onetomany

➔ db.createCollection("penerbit")

➔ db.createCollection("buku")

➔

```
> db.createCollection("penerbit")
{ "ok" : 1 }
> db.createCollection("buku")
{ "ok" : 1 }
```

2. Membuat collections penerbit dan insert collections penerbit pada database onetomany

➔ db.penerbit.insert({id:'11223344', nama:'lancar jaya', alamat:'jalan dipo no.56 Surabaya', no_telp:'0343123456', email:'lancarjaya2@gmail.com'})

➔ db.penerbit.insert({id:'12341234', nama:'sinar abadi', alamat:'jalan arjuna no.11 Pasuruan', no_telp:'0343604461', email:'sinarabadi@gmail.com'})

➔

```
> db.penerbit.find().pretty()
{
  "_id" : ObjectId("5c75619e882a7d4c90048fb3"),
  "id" : "11223344",
  "nama" : "lancar jaya",
  "alamat" : "jalan dipo no.56 Surabaya",
  "no_telp" : "0343123456",
  "email" : "lancarjaya@gmail.com"
}
{
  "_id" : ObjectId("5c7561b0882a7d4c90048fb4"),
  "id" : "12341234",
  "nama" : "sinar abadi",
  "alamat" : "jalan arjuna no.11 Pasuruan",
  "no_telp" : "0343604461",
  "email" : "sinarabadi@gmail.com"
}
```

3. Membuat insert collections buku pada database onetomany

➔ `db.buku.insert({id:'a123b456', penerbit_id:'11223344', judul:'how to train your dragon', penulis:'liam payne', tahun:'2017'})`

➔ `> db.buku.find().pretty()`

```
{
  "_id" : ObjectId("5c7561cf882a7d4c90048fb5"),
  "id" : "a123b456",
  "penerbit_id" : "11223344",
  "judul" : "how to train your dragon",
  "penulis" : "liam payne",
  "tahun" : "2017"
}
{
  "_id" : ObjectId("5c7561e0882a7d4c90048fb6"),
  "id" : "234abc56",
  "penerbit_id" : "12341234",
  "judul" : "jangan mau jadi misqueen",
  "penulis" : "pidi baiq",
  "tahun" : "2017"
}
{
  "_id" : ObjectId("5c7561ec882a7d4c90048fb7"),
  "id" : "12def789",
  "penerbit_id" : "11223344",
  "judul" : "gen halulala",
  "penulis" : "atta halulala",
  "tahun" : "2018"
}
{
  "_id" : ObjectId("5c7561f6882a7d4c90048fb8"),
  "id" : "ab234cd",
  "penerbit_id" : "11223344",
  "judul" : "hangout",
  "penulis" : "raditya dika",
  "tahun" : "2018"
}
{
  "_id" : ObjectId("5c756200882a7d4c90048fb9"),
  "id" : "ich567kv",
  "penerbit_id" : "12341234",
  "judul" : "tetangga masa gitu",
  "penulis" : "asyanti",
  "tahun" : "2018"
}
```

B. MANY TO MANY

1. Membuat database manytomany

➔ `use manytomany`

➔ `db.createCollection("mahasiswa")`

➔ `db.createCollection("matkul_pilihan")`

➔ `db.createCollection("matkul")`

➔ `> db.createCollection("mahasiswa")`
`{ "ok" : 1 }`
`> db.createCollection("matkul_pilihan")`
`{ "ok" : 1 }`
`> db.createCollection("matkul")`
`{ "ok" : 1 }`

2. Membuat collections mahasiswa dan insert collections mahasiswa pada database manytomany

→ db.mahasiswa.insert({id:'17050623012', nama:'nisa nadila', alamat:'pasuruan', tanggal_lahir:'02 november 1998', email:'nisa.17050623012@mhs.unesa.ac.id'})

→ db.mahasiswa.insert({id:'17050623022', nama:'jelita mutiara', alamat:'gresik', tanggal_lahir:'06 september 1998', email:'jelita.17050623022@mhs.unesa.ac.id'})

→

```
> db.mahasiswa.find().pretty()
{
  "_id" : ObjectId("5c768a8204dac929566204a8"),
  "id" : "17050623012",
  "nama" : "nisa nadila",
  "alamat" : "pasuruan",
  "tanggal_lahir" : "02 november 1998",
  "email" : "nisa.17050623012@mhs.unesa.ac.id"
}
{
  "_id" : ObjectId("5c768af104dac929566204a9"),
  "id" : "17050623022",
  "nama" : "jelita mutiara",
  "alamat" : "gresik",
  "tanggal_lahir" : "06 september 1998",
  "email" : "jelita.17050623022@mhs.unesa.ac.id"
}
```

3. Membuat collections matkul pilihan dan insert collections matkul pilihan pada database manytomany

→ db.matkul_pilihan.insert({id:'17050623012', id_matkul:'10'})

→ db.matkul_pilihan.insert({id:'17050623012', id_matkul:'11'})

→ db.matkul_pilihan.insert({id:'17050623022', id_matkul:'11'})

→ db.matkul_pilihan.insert({id:'17050623022', id_matkul:'12'})

→

```
> db.matkul_pilihan.find().pretty()
{
  "_id" : ObjectId("5c768e8704dac929566204aa"),
  "id" : "17050623012",
  "id_matkul" : "10"
}
{
  "_id" : ObjectId("5c768ea004dac929566204ab"),
  "id" : "17050623012",
  "id_matkul" : "11"
}
{
  "_id" : ObjectId("5c768ef104dac929566204ac"),
  "id" : "17050623022",
  "id_matkul" : "11"
}
{
  "_id" : ObjectId("5c768efe04dac929566204ad"),
  "id" : "17050623022",
  "id_matkul" : "12"
}
```

4. Membuat collections matkul dan insert collections matkul pada database manytomany

➔ `db.matkul.insert({id_matkul:'10', id_dosen:'122', jumlah_sks:'2', matkul:'pemweb'})`

➔ `db.matkul.insert({id_matkul:'11', id_dosen:'123', jumlah_sks:'2', matkul:'pemdask'})`

➔ `db.matkul.insert({id_matkul:'12', id_dosen:'124', jumlah_sks:'4', matkul:'pemvisual'})`

➔ `> db.matkul.find().pretty()`

```
{
  "_id" : ObjectId("5c76930704dac929566204ae"),
  "id_matkul" : "10",
  "id_dosen" : "122",
  "jumlah_sks" : "2",
  "matkul" : "pemweb"
}
{
  "_id" : ObjectId("5c76932004dac929566204af"),
  "id_matkul" : "11",
  "id_dosen" : "123",
  "jumlah_sks" : "2",
  "matkul" : "pemdask"
}
{
  "_id" : ObjectId("5c76933a04dac929566204b0"),
  "id_matkul" : "12",
  "id_dosen" : "124",
  "jumlah_sks" : "4",
  "matkul" : "pemvisual"
}
```

5. UPDATE data pada collections mahasiswa

➔ `db.mahasiswa.update({"nama":"jelita mutiara"},{$set:{"nama":"jelita setyo budi"}})`

```
{
  "_id" : ObjectId("5c768af104dac929566204a9"),
  "id" : "17050623022",
  "nama" : "jelita mutiara",
  "alamat" : "gresik",
  "tanggal_lahir" : "06 september 1998",
  "email" : "jelita.17050623022@mhs.unesa.ac.id"
}
```

```
{
  "_id" : ObjectId("5c768af104dac929566204a9"),
  "id" : "17050623022",
  "nama" : "jelita setyo budi",
  "alamat" : "gresik",
  "tanggal_lahir" : "06 september 1998",
  "email" : "jelita.17050623022@mhs.unesa.ac.id"
}
```