

Task 1 - Introduction to NoSQL and MongoDB

1. Create

a. Buat 5 data operator pada tabel operators:

```
> use digital_outlet
switched to db digital_outlet
> db.operators.insert([ {name: "Denny", created_at: Date()}, {name: "Okky", created_at: Date()}, {name: "Alifa", created_at: Date("2022-07-25T21:30:12.221Z")}, {name: "Adri", created_at: Date("2022-07-25T21:30:12.221Z")}, {name: "Taylor", created_at: Date("2022-07-25T21:30:12.221Z")} ])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 5,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

operators @digital_outlet (Local MongoDB) - Collection - Navicat Premium

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Objects operators @digital_outlet (Local MongoDB)

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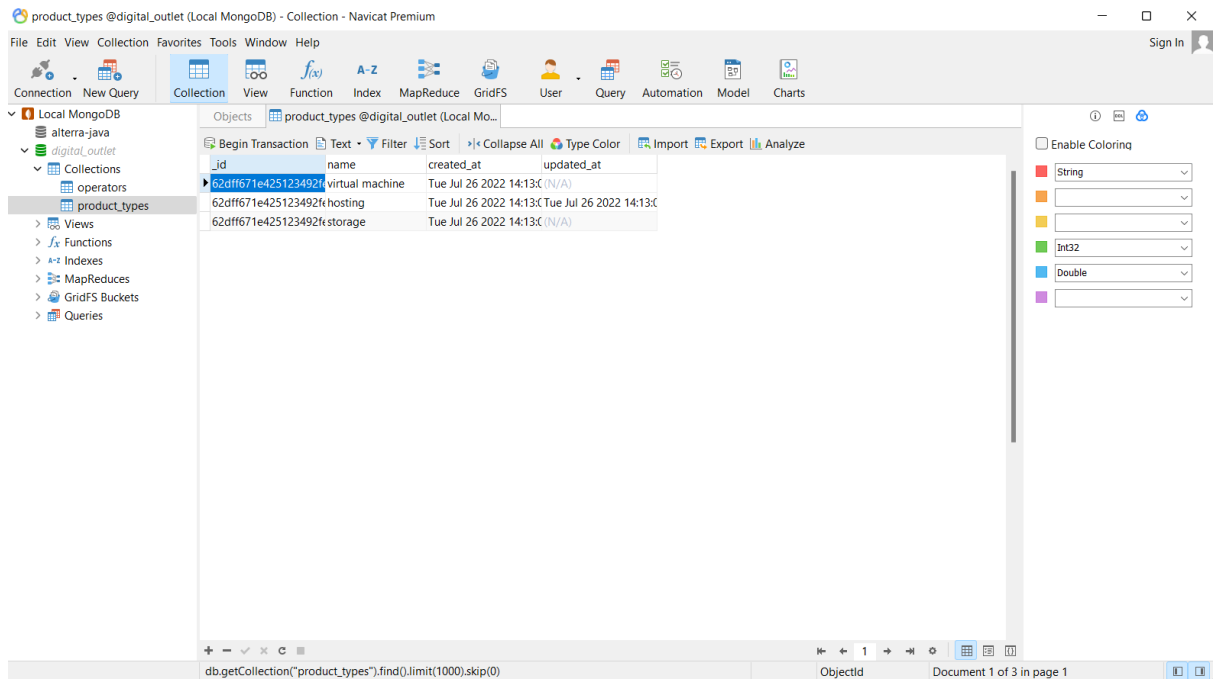
_id	name	created_at
62dff20ae425123492f0	Denny	Tue Jul 26 2022 13:54:1
62dff20ae425123492f1	Okky	Tue Jul 26 2022 13:54:1
62dff20ae425123492f2	Alifa	Tue Jul 26 2022 13:54:1
62dff20ae425123492f3	Adri	(N/A)
62dff20ae425123492f4	Taylor	(N/A)

db.getCollection("operators").find().limit(1000).skip(0)

ObjectID Document 1 of 5 in page 1

b. Insert 3 product_types:

```
> db.product_types.insert([ {name: "virtual machine", created_at: Date()}, {name: "hosting", created_at: Date("2022-07-21T21:12:12Z"), updated_at: Date()}, {name: "storage", created_at: Date("2022-07-21T21:12:12Z"), updated_at: Date()} ])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

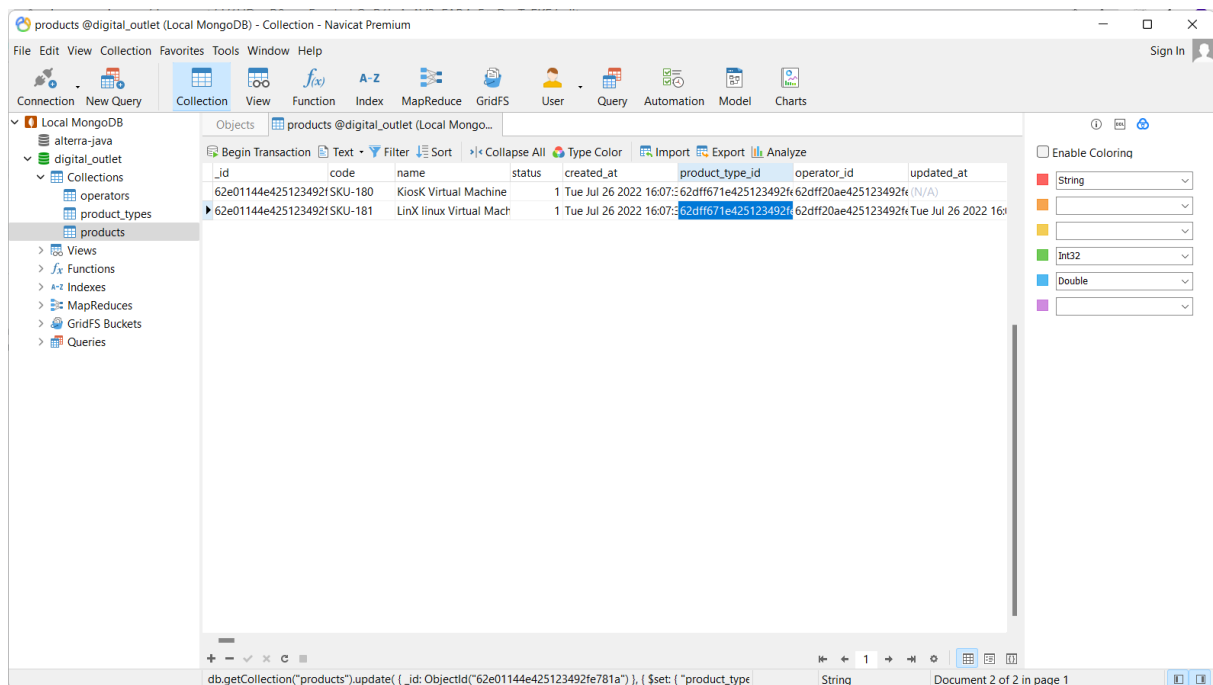


c. Insert 2 product dengan product type id = 1 dan operator id 3

```

> var vm = db.product_types.findOne({name: "virtual machine"})
> var vmId = vm._id
> vmId
ObjectId("62dff671e425123492fe7816")
> var op = db.operators.findOne({name: "Denny"})
> var opId = op._id
> db.products.insert([
  {code: "SKU-188", name: "Kiosk Virtual Machine", status: 1, created_at: Date(), product_type_id: vmId, operator_id: opId},
  {code: "SKU-181", name: "LinX linux Virtual Machine", status: 1, created_at: Date("2022-05-05T23:12:08.122Z"), updated_at: Date(), product_type: vmId, operator_id: opId}])
BulkWriteResult({
  "writeErrors": [ ],
  "writeConcernErrors": [ ],
  "nInserted": 2,
  "nUpserted": 0,
  "nMatched": 0,
  "nModified": 0,
  "nRemoved": 0,
  "upserted": [ ]
})

```



d. Insert 3 product dengan product type id = 2 dan operator id 1

```

> var ptsId = db.product_types.findOne({name: "hosting"})._id
> var opsId = db.operators.findOne({name: "Alifa"})._id
> db.products.insert([
  {code: "SKU-190", name: "Azure Cyber Hosting", status: 1, created_at: Date(), product_type_id: ptsId, operator_id: opsId},
  {code: "SKU-191", name: "AWS AutoHosting", status: 1, created_at: Date(), product_type_id: ptsId, operator_id: opsId},
  {code: "SKU-191", name: "Republican Hosting", status: 0, created_at: Date(), updated_at: Date()}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})

```

products @digital_outlet (Local MongoDB) - Collection - Navicat Premium

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_id	code	name	status	created_at	product_type_id	operator_id	updated_at	product_type
62e01144e425123492	SKU-180	Kiosk Virtual Machine	1	Tue Jul 26 2022 16:07:56	62e0ff671e425123492	62e0ff20ae425123492	(N/A)	(N/A)
62e01144e425123492	SKU-181	Linux Virtual Mach	1	Tue Jul 26 2022 16:07:56	62e0ff671e425123492	62e0ff20ae425123492	Tue Jul 26 2022 16:07:56	62e0ff671e425123492
62e01ea6ff24f247834c	SKU-190	Azure Cyber Hosting	1	Tue Jul 26 2022 17:04:56	62e0ff671e425123492	62e0ff20ae425123492	(N/A)	(N/A)
62e01ea6ff24f247834c	SKU-191	AWS AutoHosting	1	Tue Jul 26 2022 17:04:56	62e0ff671e425123492	62e0ff20ae425123492	(N/A)	(N/A)
62e01ea6ff24f247834c	SKU-191	Republican Hosting	0	Tue Jul 26 2022 17:04:56	(N/A)	(N/A)	Tue Jul 26 2022 17:04:56	(N/A)

db.getCollection("products").find().limit(1000).skip(0)

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Enable Coloring

String

Int32

Double

e. Insert 3 product dengan product type id = 3 dan operator id 4

```

> var ptsId = db.product_types.findOne({name: "storage"})._id
> var opsId = db.operators.findOne({name: "Okky"})._id
> db.products.insert([
  {code: "SKU-170", name: "AZ Crystal", status: 1, created_at: Date(), product_type_id: ptsId, operator_id: opsId},
  {code: "SKU-171", name: "DB Premium", status: 1, created_at: Date(), product_type_id: ptsId, operator_id: opsId},
  {code: "SKU-172", name: "G D Super Plan", status: 0, created_at: Date(), updated_at: Date()}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
>

```

products @digital_outlet (Local MongoDB) - Collection - Navicat Premium

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_id	code	name	status	created_at	product_type_id	operator_id	updated_at	product_type
62e01144e425123492f	SKU-180	Kiosk Virtual Machine	1	Tue Jul 26 2022 16:07:56	62dff671e425123492f	62dff20ae425123492f	(N/A)	(N/A)
62e01144e425123492f	SKU-181	Linux Virtual Mach	1	Tue Jul 26 2022 16:07:56	62dff671e425123492f	62dff20ae425123492f	(N/A)	(N/A)
62e01ea0ff24f247834f	SKU-190	Azure Cyber Hosting	1	Tue Jul 26 2022 17:04:56	62dff671e425123492f	62dff20ae425123492f	(N/A)	(N/A)
62e01ea0ff24f247834f	SKU-191	AWS AutoHosting	1	Tue Jul 26 2022 17:04:56	62dff671e425123492f	62dff20ae425123492f	(N/A)	(N/A)
62e01ea0ff24f247834f	SKU-191	Republican Hosting	0	Tue Jul 26 2022 17:04:56	62dff671e425123492f	62dff20ae425123492f	(N/A)	(N/A)
62e01fafff24f2478340	SKU-170	AZ Crystal	1	Tue Jul 26 2022 17:09:56	62dff671e425123492f	62dff20ae425123492f	(N/A)	(N/A)
62e01fafff24f2478340	SKU-171	DB Premium	1	Tue Jul 26 2022 17:09:56	62dff671e425123492f	62dff20ae425123492f	(N/A)	(N/A)
62e01fafff24f2478340	SKU-172	GD Super Plan	0	Tue Jul 26 2022 17:09:56	62dff671e425123492f	62dff20ae425123492f	(N/A)	(N/A)

db.getCollection("products").find().limit(1000).skip(0)

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- f. Insert product description pada setiap product
- g. Insert 3 payment methods

```
> db.productsdb.payment_methods.insert([
  {name: "Bank Transfer", status: 1, created_at: Date(), updated_at: Date()},
  {name: "Virtual Account", status: 1, created_at: Date(), updated_at: Date()},
  {name: "GoPay", status: 1, created_at: Date(), updated_at: Date()}
])
BulkWriteResult({
  "writeErrors": [ ],
  "writeConcernErrors": [ ],
  "nInserted": 3,
  "nUpserted": 0,
  "nMatched": 0,
  "nModified": 0,
  "nRemoved": 0,
  "upserted": [ ]
})
```

payment_methods @digital_outlet (Local MongoDB) - Collection - Navicat Premium

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_id	name	status	created_at	updated_at
62e02185f124f247834f	Bank Transfer	1	Tue Jul 26 2022 17:16:56	(N/A)
62e02185f124f247834f	Virtual Account	1	Tue Jul 26 2022 17:16:56	(N/A)
62e02185f124f247834f	GoPay	1	Tue Jul 26 2022 17:16:56	(N/A)

db.getCollection("payment_methods").find().limit(1000).skip(0)

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- h. Insert 5 user pada tabel users

```
> db.users.insert([{"status": 1, dob: ISODate("1992-08-07"), gender: 'M', created_at: Date()}, {"status": 1, dob: ISODate("1988-02-11"), gender: 'M', created_at: ISODate("2022-07-12"), updated_at: Date()}, {"status": 1, dob: ISODate("1994-12-12"), gender: 'F', created_at: ISODate("2022-07-13"), updated_at: Date()}, {"status": 1, dob: ISODate("1992-09-22"), gender: 'M', created_at: Date()}, {"status": 1, dob: ISODate("1998-10-17"), gender: 'F', created_at: Date()}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 5,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

users @digital_outlet (Local MongoDB) - Collection - Navicat Premium

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_id	status	dob	gender	created_at	updated_at
62e02374ff24f247834c	1	1992-08-07 00:00:00.000 M		Tue Jul 26 2022 17:25: (N/A)	
62e02374ff24f247834c	1	1988-02-11 00:00:00.000 M		2022-07-12 00:00:00.000 Tue Jul 26 2022 17:25: (N/A)	
62e02374ff24f247834c	1	1994-12-12 00:00:00.000 F		2022-07-13 00:00:00.000 Tue Jul 26 2022 17:25: (N/A)	
62e02374ff24f247834c	1	1992-09-22 00:00:00.000 M		Tue Jul 26 2022 17:25: (N/A)	
62e02374ff24f247834c	1	1998-10-17 00:00:00.000 F		Tue Jul 26 2022 17:25: (N/A)	

db.getCollection("users").find().limit(1000).skip(0)

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i. Insert 3 transaksi untuk masing-masing user

```
> var user1 = ObjectId("62e02374ff24f24783407ca3")
> var user2 = ObjectId("62e02374ff24f24783407ca4")
> var user3 = ObjectId("62e02374ff24f24783407ca5")
> var user4 = ObjectId("62e02374ff24f24783407ca6")
> var user5 = ObjectId("62e02374ff24f24783407ca7")
> db.transactions.insert([{"user_id": user1, payment_method: db.payment_methods.findOne({name: "Bank Transfer"})._id, status: "PAID", total_qty: 2, total_price: 21752321.22, created_at: Date()}, {"user_id": user1, payment_method: db.payment_methods.findOne({name: "Bank Transfer"})._id, status: "PAID", total_qty: 1, total_price: 165000, created_at: ISODate("2022-06-19T10:00:21.242Z"), updated_at: Date(), {user_id: user1, payment_method: db.payment_methods.findOne({name: "Virtual Account"})._id, status: "ORDERED", total_qty: 1, total_price: 2175000, created_at: Date()}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

transactions @digital_outlet (Local MongoDB) - Collection - Navicat Premium

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_id	user_id	payment_method	status	total_qty	total_price	created_at	updated_at
62e026d53819c3d1c9	62e02374ff24f24783407ca3	62e02185ff24f24783407ca0	PAID	2	21752321.22	Tue Jul 26 2022 17:39: (N/A)	
62e026d53819c3d1c9	62e02374ff24f24783407ca3	62e02185ff24f24783407ca0	PAID	1	165000	2022-06-19 10:00:21.2 Tue Jul 26 2022 17:39: (N/A)	
62e026d53819c3d1c9	62e02374ff24f24783407ca3	62e02185ff24f24783407ca1	ORDERED	1	2175000	Tue Jul 26 2022 17:39: (N/A)	

```

> db.transactions.insert([
  {user_id: user2, payment_method: db.payment_methods.findOne({name: "GoPay"}).id, status: "PAID", total_qty: 1,
  total_price: 252321.22, created_at: Date()},
  {user_id: user2, payment_method: db.payment_methods.findOne({name: "Bank Transfer"}).id, status: "PAID", total_qty: 1, total_price: 1265000, created_at: ISODate("2022-06-19T10:00:21.242Z")},
  {user_id: user2, payment_method: db.payment_methods.findOne({name: "Virtual Account"}).id, status: "IN BASKET", total_qty: 2, total_price: 2875000, created_at: Date()}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})

```

transactions @digital_outlet (Local MongoDB) - Collection - Navicat Premium

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_id	user_id	payment_method	status	total_qty	total_price	created_at	updated_at
62e026d53819c3d1c962e02374ff2424783407ca3	62e02185ff2424783407ca0	PAID	2	21752321.22	Tue Jul 26 2022 17:39:5 (N/A)		
62e026d53819c3d1c962e02374ff2424783407ca0	62e02185ff2424783407ca0	PAID	1	1650000	2022-06-19 10:00:21.2-Tue Jul 26 2022 17:39:5 (N/A)		
62e026d53819c3d1c962e02374ff2424783407ca3	62e02185ff2424783407ca1	ORDERED	1	2175000	Tue Jul 26 2022 17:39:5 (N/A)		
62e0272f3819c3d1c962e02374ff2424783407ca4	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:41:5 (N/A)		
62e0272f3819c3d1c962e02374ff2424783407ca4	62e02185ff2424783407ca0	PAID	1	1265000	2022-06-19 10:00:21.2-Tue Jul 26 2022 17:41:5 (N/A)		
62e0272f3819c3d1c962e02374ff2424783407ca4	62e02185ff2424783407ca1	IN BASKET	2	2875000	Tue Jul 26 2022 17:41:5 (N/A)		

db.getCollection("transactions").find().limit(1000).skip(0)

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☐ Enable Coloring

String

int32

Double

```

> db.transactions.insert([
  {user_id: user3, payment_method: db.payment_methods.findOne({name: "GoPay"}).id, status: "PAID", total_qty: 1,
  total_price: 252321.22, created_at: Date()},
  {user_id: user3, payment_method: db.payment_methods.findOne({name: "Bank Transfer"}).id, status: "PAID", total_qty: 1, total_price: 1265000, created_at: ISODate("2022-06-19T10:00:21.242Z")},
  {user_id: user3, payment_method: db.payment_methods.findOne({name: "Virtual Account"}).id, status: "IN BASKET", total_qty: 2, total_price: 2875000, created_at: Date()}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})

```

Local MongoDB

alterra-java

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transactions | digital_outlet (Local Mon...

Begin Transaction Text Filter Sort Collapse All Type Color Import Export Analyze

_id	user_id	payment_method	status	total_qty	total_price	created_at	updated_at
62e026d53819c3d1c962e02374ff2424783407ca3	62e02185ff2424783407ca0	PAID	2	21752321.22	Tue Jul 26 2022 17:39:5 (N/A)		
62e026d53819c3d1c962e02374ff2424783407ca0	62e02185ff2424783407ca0	PAID	1	1650000	2022-06-19 10:00:21.2-Tue Jul 26 2022 17:39:5 (N/A)		
62e026d53819c3d1c962e02374ff2424783407ca3	62e02185ff2424783407ca1	ORDERED	1	2175000	Tue Jul 26 2022 17:39:5 (N/A)		
62e0272f3819c3d1c962e02374ff2424783407ca4	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:41:5 (N/A)		
62e0272f3819c3d1c962e02374ff2424783407ca4	62e02185ff2424783407ca0	PAID	1	1265000	2022-06-19 10:00:21.2-Tue Jul 26 2022 17:41:5 (N/A)		
62e0272f3819c3d1c962e02374ff2424783407ca4	62e02185ff2424783407ca1	IN BASKET	2	2875000	Tue Jul 26 2022 17:41:5 (N/A)		
62e027e53819c3d1c962e02374ff2424783407ca5	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:44:5 (N/A)		
62e027e53819c3d1c962e02374ff2424783407ca5	62e02185ff2424783407ca0	PAID	1	1265000	2022-06-19 10:00:21.2-Tue Jul 26 2022 17:44:5 (N/A)		
62e027e53819c3d1c962e02374ff2424783407ca5	62e02185ff2424783407ca1	IN BASKET	2	2875000	Tue Jul 26 2022 17:44:5 (N/A)		

db.getCollection("transactions").find().limit(1000).skip(0)

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Enable Coloring

String

int32

Double

```

> db.transactions.insert([
  {user_id: user4, payment_method: db.payment_methods.findOne({name: "GoPay"})._id, status: "PAID", total_qty: 1,
  total_price: 252321.22, created_at: Date()},
  {user_id: user4, payment_method: db.payment_methods.findOne({name: "Bank Transfer"})._id, status: "PAID",
  total_qty: 1, total_price: 1265000, created_at: ISODate("2022-06-19T10:00:21.242Z"), updated_at: Date()},
  {user_id: user4, payment_method: db.payment_methods.findOne({name: "Virtual Account"})._id, status: "IN BASKET",
  total_qty: 2, total_price: 2875000, created_at: Date()}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})

```

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_id	user_id	payment_method	status	total_qty	total_price	created_at	updated_at
62e026d53819c3d1c9	62e02374ff2424783407ca3	62e02185ff2424783407ca0	PAID	2	21752321.22	Tue Jul 26 2022 17:39:5	(N/A)
62e026d53819c3d1c9	62e02374ff2424783407ca3	62e02185ff2424783407ca0	PAID	1	1650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:39:5
62e026d53819c3d1c9	62e02374ff2424783407ca3	62e02185ff2424783407ca1	ORDERED	1	21750000	Tue Jul 26 2022 17:39:5	(N/A)
62e0272f3819c3d1c9	62e02374ff2424783407ca4	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:41:5	(N/A)
62e0272f3819c3d1c9	62e02374ff2424783407ca4	62e02185ff2424783407ca2	PAID	1	12650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:41:5
62e0272f3819c3d1c9	62e02374ff2424783407ca4	62e02185ff2424783407ca1	IN BASKET	2	28750000	Tue Jul 26 2022 17:41:5	(N/A)
62e027e53819c3d1c9	62e02374ff2424783407ca5	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:44:5	(N/A)
62e027e53819c3d1c9	62e02374ff2424783407ca5	62e02185ff2424783407ca0	PAID	1	12650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:44:5
62e027e53819c3d1c9	62e02374ff2424783407ca5	62e02185ff2424783407ca1	IN BASKET	2	28750000	Tue Jul 26 2022 17:44:5	(N/A)
62e0283a3819c3d1c9	62e02374ff2424783407ca6	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:45:5	(N/A)
62e0283a3819c3d1c9	62e02374ff2424783407ca6	62e02185ff2424783407ca0	PAID	1	12650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:45:5
62e0283a3819c3d1c9	62e02374ff2424783407ca6	62e02185ff2424783407ca1	IN BASKET	2	28750000	Tue Jul 26 2022 17:45:5	(N/A)

db.getCollection("transactions").find().limit(1000).skip(0) | ObjectID | Document 1 of 12 in page 1

```

> db.transactions.insert([
  {user_id: user5, payment_method: db.payment_methods.findOne({name: "GoPay"})._id, status: "PAID", total_qty: 1,
  total_price: 252321.22, created_at: Date()},
  {user_id: user5, payment_method: db.payment_methods.findOne({name: "Bank Transfer"})._id, status: "PAID",
  total_qty: 1, total_price: 1265000, created_at: ISODate("2022-06-19T10:00:21.242Z"), updated_at: Date()},
  {user_id: user5, payment_method: db.payment_methods.findOne({name: "Virtual Account"})._id, status: "IN BASKET",
  total_qty: 2, total_price: 2875000, created_at: Date()}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})

```

Local MongoDB | Objects | transactions @digital_outlet (Local Mon... | Text | Filter | Sort | Collapse All | Type Color | Import | Export | Analyze

_id	user_id	payment_method	status	total_qty	total_price	created_at	updated_at
62e026d53819c3d1c9	62e02374ff2424783407ca3	62e02185ff2424783407ca0	PAID	2	21752321.22	Tue Jul 26 2022 17:39:5	(N/A)
62e026d53819c3d1c9	62e02374ff2424783407ca3	62e02185ff2424783407ca0	PAID	1	1650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:39:5
62e026d53819c3d1c9	62e02374ff2424783407ca3	62e02185ff2424783407ca1	ORDERED	1	21750000	Tue Jul 26 2022 17:39:5	(N/A)
62e0272f3819c3d1c9	62e02374ff2424783407ca4	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:41:5	(N/A)
62e0272f3819c3d1c9	62e02374ff2424783407ca4	62e02185ff2424783407ca2	PAID	1	12650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:41:5
62e0272f3819c3d1c9	62e02374ff2424783407ca4	62e02185ff2424783407ca1	IN BASKET	2	28750000	Tue Jul 26 2022 17:41:5	(N/A)
62e027e53819c3d1c9	62e02374ff2424783407ca5	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:44:5	(N/A)
62e027e53819c3d1c9	62e02374ff2424783407ca5	62e02185ff2424783407ca0	PAID	1	12650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:44:5
62e027e53819c3d1c9	62e02374ff2424783407ca5	62e02185ff2424783407ca1	IN BASKET	2	28750000	Tue Jul 26 2022 17:44:5	(N/A)
62e0283a3819c3d1c9	62e02374ff2424783407ca6	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:45:5	(N/A)
62e0283a3819c3d1c9	62e02374ff2424783407ca6	62e02185ff2424783407ca0	PAID	1	12650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:45:5
62e0283a3819c3d1c9	62e02374ff2424783407ca6	62e02185ff2424783407ca1	IN BASKET	2	28750000	Tue Jul 26 2022 17:45:5	(N/A)
62e0288d3819c3d1c9	62e02374ff2424783407ca7	62e02185ff2424783407ca2	PAID	1	252321.22	Tue Jul 26 2022 17:46:5	(N/A)
62e0288d3819c3d1c9	62e02374ff2424783407ca7	62e02185ff2424783407ca0	PAID	1	12650000	2022-06-19 10:00:21.2	Tue Jul 26 2022 17:46:5
62e0288d3819c3d1c9	62e02374ff2424783407ca7	62e02185ff2424783407ca1	IN BASKET	2	28750000	Tue Jul 26 2022 17:46:5	(N/A)

db.getCollection("transactions").find().limit(1000).skip(0) | ObjectID | Document 1 of 15 in page 1

j. Insert 3 product di masing-masing transaksi

2. Read

a. Tampilkan nama user dengan gender M

```
> db.users.find({gender: 'M'}).pretty()
{
  "_id" : ObjectId("62e02374ff24f24783407ca3"),
  "status" : 1,
  "dob" : ISODate("1992-08-07T00:00:00Z"),
  "gender" : "M",
  "created_at" : "Tue Jul 26 2022 17:25:08 GMT+0000 (UTC)"
}
{
  "_id" : ObjectId("62e02374ff24f24783407ca4"),
  "status" : 1,
  "dob" : ISODate("1988-02-11T00:00:00Z"),
  "gender" : "M",
  "created_at" : ISODate("2022-07-12T00:00:00Z"),
  "updated_at" : "Tue Jul 26 2022 17:25:08 GMT+0000 (UTC)"
}
{
  "_id" : ObjectId("62e02374ff24f24783407ca6"),
  "status" : 1,
  "dob" : ISODate("1992-09-22T00:00:00Z"),
  "gender" : "M",
  "created_at" : "Tue Jul 26 2022 17:25:08 GMT+0000 (UTC)"
}
> 
```

b. Tampilkan product dengan id 3

```
> db.products.findOne({_id: ObjectId("62e01ea6ff24f24783407c9a")})
{
  "_id" : ObjectId("62e01ea6ff24f24783407c9a"),
  "code" : "SKU-190",
  "name" : "Azure Cyber Hosting",
  "status" : 1,
  "created_at" : "Tue Jul 26 2022 17:04:38 GMT+0000 (UTC)",
  "product_type_id" : ObjectId("62dff671e425123492fe7817"),
  "operator_id" : ObjectId("62dff20ae425123492fe7813")
}
> 
```

c. Hitung jumlah user dengan gender F

```
> db.users.find({gender: 'F'}).count()
2
```

d. Tampilkan user dengan mengurut abjad

e. Tampilkan 5 data product

```
> db.products.find().limit(5)
{ "_id" : ObjectId("62e01144e425123492fe7819"), "code" : "SKU-180", "name" : "Kiosk Virtual Machine", "status" : 1, "created_at" : "Tue Jul 26 2022 16:07:32 GMT+0000 (UTC)", "product_type_id" : ObjectId("62dff671e425123492fe7816"), "operator_id" : ObjectId("62dff20ae425123492fe7811") }
{ "_id" : ObjectId("62e01144e425123492fe781a"), "code" : "SKU-181", "name" : "LinX linux Virtual Machine", "status" : 1, "created_at" : "Tue Jul 26 2022 16:07:32 GMT+0000 (UTC)", "updated_at" : "Tue Jul 26 2022 16:07:32 GMT+0000 (UTC)", "product_type" : ObjectId("62dff671e425123492fe7816"), "operator_id" : ObjectId("62dff20ae425123492fe7811"), "product_type_id" : "62dff671e425123492fe7816" }
{ "_id" : ObjectId("62e01ea6ff24f24783407c9a"), "code" : "SKU-190", "name" : "Azure Cyber Hosting", "status" : 1, "created_at" : "Tue Jul 26 2022 17:04:38 GMT+0000 (UTC)", "product_type_id" : ObjectId("62dff671e425123492fe7817"), "operator_id" : ObjectId("62dff20ae425123492fe7813") }
{ "_id" : ObjectId("62e01ea6ff24f24783407c9b"), "code" : "SKU-191", "name" : "AWS AutoHosting", "status" : 1, "created_at" : "Tue Jul 26 2022 17:04:38 GMT+0000 (UTC)", "product_type_id" : ObjectId("62dff671e425123492fe7817"), "operator_id" : ObjectId("62dff20ae425123492fe7813") }
{ "_id" : ObjectId("62e01ea6ff24f24783407c9c"), "code" : "SKU-191", "name" : "Republican Hosting", "status" : 0, "created_at" : "Tue Jul 26 2022 17:04:38 GMT+0000 (UTC)", "updated_at" : "Tue Jul 26 2022 17:04:38 GMT+0000 (UTC)" }
```


3. Update

- a. Ubah data product id 1 dengan nama: "product dummy"

```
> db.products.update({_id: ObjectId("62e01144e425123492fe7819")}, {$set: {name: "Product Dummy"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.products.findOne({_id: ObjectId("62e01144e425123492fe7819")})
{
  "_id" : ObjectId("62e01144e425123492fe7819"),
  "code" : "SKU-180",
  "name" : "Product Dummy",
  "status" : 1,
  "created_at" : "Tue Jul 26 2022 16:07:32 GMT+0000 (UTC)",
  "product_type_id" : ObjectId("62dff671e425123492fe7816"),
  "operator_id" : ObjectId("62dff20ae425123492fe7811")
}
```

- b. Ubah qty = 3 pada transaction detail dengan id 1

4. Delete

- a. Delete data pada tabel products dengan id 1

```
> db.products.remove({_id: ObjectId("62e01144e425123492fe7819")}, {justOne: true})
WriteResult({ "nRemoved" : 1 })
```

- b. Delete data pada tabel products dengan product type id 1

Task 2 - Database: Aggregation MongoDB

1. Gabungkan (dan tampilkan) data buku dari author id 1 dan author id 2

```
> db.books.find().sort({authorID: 1})
{ "_id" : 1, "title" : "Wawasan Pancasila", "authorID" : 1, "publisherID" : 1, "price" : 71200, "stats" : { "page" : 324, "weight" : 300 }, "publishedAt" : ISODate("2018-10-01T00:00:00Z"), "category" : [ "social", "politics" ] }
{ "_id" : 2, "title" : "Mata Air Keteladanan", "authorID" : 1, "publisherID" : 2, "price" : 106250, "stats" : { "page" : 672, "weight" : 650 }, "publishedAt" : ISODate("2017-09-01T00:00:00Z"), "category" : [ "social", "politics" ] }
{ "_id" : 3, "title" : "Revolusi Pancasila", "authorID" : 1, "publisherID" : 1, "price" : 54400, "stats" : { "page" : 220, "weight" : 500 }, "publishedAt" : ISODate("2015-05-01T00:00:00Z"), "category" : [ "social", "politics" ] }
{ "_id" : 4, "title" : "Self Driving", "authorID" : 2, "publisherID" : 1, "price" : 58650, "stats" : { "page" : 286, "weight" : 300 }, "publishedAt" : ISODate("2018-05-01T00:00:00Z"), "category" : [ "self-development" ] }
{ "_id" : 5, "title" : "Self Disruption", "authorID" : 2, "publisherID" : 2, "price" : 83300, "stats" : { "page" : 400, "weight" : 800 }, "publishedAt" : ISODate("2018-05-01T00:00:00Z"), "category" : [ "self-development" ] }
```

2. Tampilkan daftar buku dan harga buku dari author id 1

```
1 db.books.find({authorID: 1}, {title: 1, price: 1, _id: 1})
```

Message	Result

3. Tampilkan total halaman buku author id 2

Local MongoDB gramedia Run Stop Explain

```
1 db.books.aggregate({ $match: {  
2   authorID: 2  
3 } },  
4 { $group: { _id : null, totalPages : { $sum: "$stats.page" } } });
```

Message Result

_id	totalPages
(Null)	686

4. Tampilkan semua fields books dan authors terkait

Local MongoDB gramedia Run Stop Explain

```
1 db.authors.aggregate([  
2   {$lookup:  
3     {  
4       from: "books",  
5       localField: "_id",  
6       foreignField: "authorID",  
7       as: "books"  
8     }  
9   }  
10 ]).pretty();
```

Message Result

_id	firstName	lastName	books
1	Yudi	Latif	(Array) 3 Elements
2	Rhenald	Kasali	(Array) 2 Elements

Local MongoDB gramedia Run Stop Explain

```

1 db.authors.aggregate([
2   {$lookup:
3     {
4       from: "books",
5       localField: "_id",
6       foreignField: "authorID",
7       as: "books"
8     }
9   }
10 ]).pretty();

```

Message Result

Result > books

books	_id	title	authorID	publisherID	price	stats	publishedAt	category
(Document) 8 Fields	1	Wawasan Pancasila	1	1	71200 (Document) 2 Fields	2018-10-01 00:00:00.0 (Array) 2 Elements		
(Document) 8 Fields	2	Mata Air Keteladanan	1	2	106250 (Document) 2 Fields	2017-09-01 00:00:00.0 (Array) 2 Elements		
(Document) 8 Fields	3	Revolusi Pancasila	1	1	54400 (Document) 2 Fields	2015-05-01 00:00:00.0 (Array) 2 Elements		

5. Tampilkan semua field books, authors, dan publishers terkait

Local MongoDB gramedia Run Stop Explain

```

1 db.books.aggregate([
2   {$lookup:
3     {
4       from: "authors",
5       localField: "authorID",
6       foreignField: "_id",
7       as: "authors"
8     }
9   },
10  {$lookup:
11    {
12      from: "publishers",
13      localField: "publisherID",
14      foreignField: "_id",
15      as: "publishers"
16    }
17  }
18 ]).pretty();

```

Message Result

_id	title	authorID	publisherID	price	stats	publishedAt	category	authors	publishers
1	Wawasan Pancasila	1	1	71200 (Document) 2 Fields	2018-10-01 00:00:00.0 (Array) 2 Elements			(Array) 1 Element	(Array) 1 Element
2	Mata Air Keteladanan	1	2	106250 (Document) 2 Fields	2017-09-01 00:00:00.0 (Array) 2 Elements			(Array) 1 Element	(Array) 1 Element
3	Revolusi Pancasila	1	1	54400 (Document) 2 Fields	2015-05-01 00:00:00.0 (Array) 2 Elements			(Array) 1 Element	(Array) 1 Element
4	Self Driving	2	1	58650 (Document) 2 Fields	2018-05-01 00:00:00.0 (Array) 1 Element			(Array) 1 Element	(Array) 1 Element
5	Self Disruption	2	2	83300 (Document) 2 Fields	2018-05-01 00:00:00.0 (Array) 1 Element			(Array) 1 Element	(Array) 1 Element

SaveFind BuilderAggregate BuilderBeautify ScriptCode SnippetTextType ColorExport Result

Local MongoDBgramediaRunStopExplain

```
1 db.books.aggregate([
2   {$lookup:
3     {
4       from: "authors",
5       localField: "authorID",
6       foreignField: "_id",
7       as: "authors"
8     }
9   },
10  {$lookup:
11    {
12      from: "publishers",
13      localField: "publisherID",
14      foreignField: "_id",
15      as: "publishers"
16    }
17  }
18 ]).pretty();
```

MessageResult

Result > authors

authors	_id	firstName	lastName
(Document) 3 Fields	1	Yudi	Latif

Local MongoDB gramedia Run Stop Explain

```
1 db.books.aggregate([
2   {$lookup:
3     {
4       from: "authors",
5       localField: "authorID",
6       foreignField: "_id",
7       as: "authors"
8     }
9   },
10  {$lookup:
11    {
12      from: "publishers",
13      localField: "publisherID",
14      foreignField: "_id",
15      as: "publishers"
16    }
17  }
18 ]).pretty();
```

Message Result

Result > publishers

publishers	_id	publisherName
▶ (Document) 2 Fields	1	Expose

6.