

Data Engineer

Virtual Internship Experience

Presented by
Zulhaji



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Jr Data Scientist

I am motivated to move forward in data field of work which can provide space for me to develop. Very comfortable working with many people also work individually in an environment of change, challenges, multiple deadlines, and priorities.

Click to contact



- **Virtual Internship Experience**
Bank Muamalat – Jan 2023
Business Intelligence Analyst
- **Virtual Internship Experience**
PT. Kimia Farma – Feb 2023
Big Data Analytics
- **Nurul Fikri Bina Prestasi**
Physics Tutor - Sep 2017 – Dec 2021

Table of Content

- 1 Case Study**
- 2 Restore Database**
- 3 Make Database and Table**
- 4 ETL Process**
- 5 Store Procedure**

Case Study

Salah satu *client* dari ID/X Partners yang bergerak di bidang *e-commerce* memiliki kebutuhan untuk membuat sebuah *Data Warehouse* yang berasal dari beberapa tabel dari *database* sumber. *Data Warehouse* ini nantinya terdiri dari satu tabel *Fact* dan beberapa tabel *Dimension*.

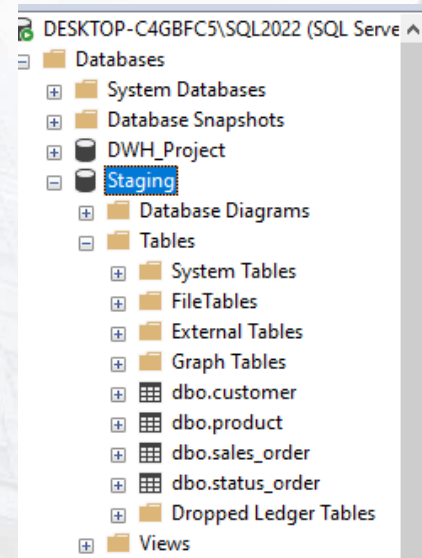
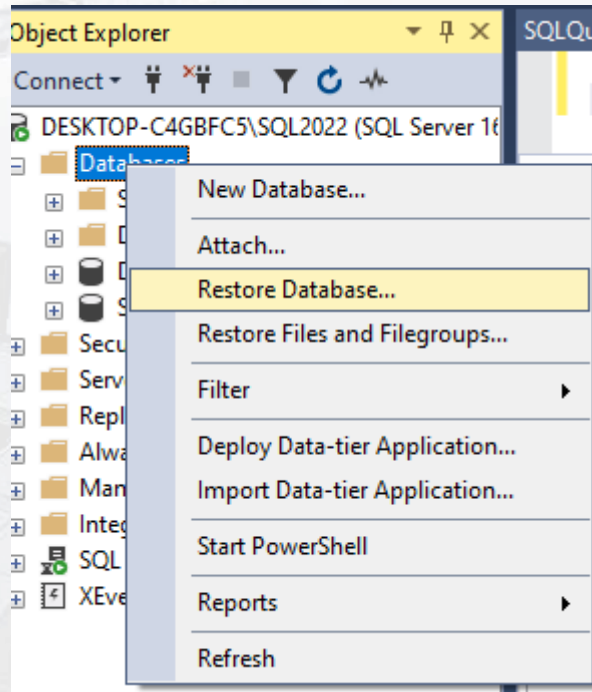
How to solve this case study?????

What are basic tools for this case study?????



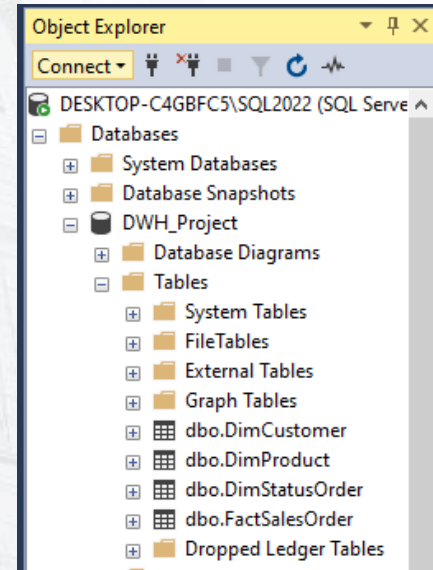
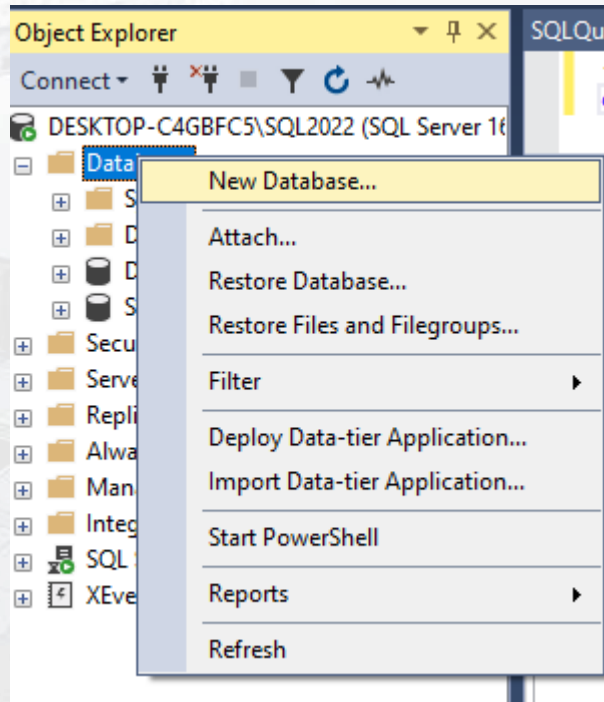
Restore Database

Import/Restore Database Staging.



Make Database and Table

Membuat sebuah *Database* bernama **DWH_Project**, serta membuat Tabel *Fact* dan *Dimension* dari tabel yang ada di *database Staging*.



Make Database and Table

membuat Tabel *Fact* dan *Dimension* dari tabel yang ada di *database Staging*.

```
create database DWH_Project;

use DWH_Project;
go
----table DimProduct
create table DimProduct(
    ProductID int not null,
    ProductName varchar(255) not null,
    ProductCategory varchar(255) not null,
    ProductUnitPrice int null,
    constraint PK_DimProduct primary key (ProductID)
);

----table DimCustomer
create table DimCustomer(
    CustomerID int not null,
    Name varchar(50) not null,
    Age int not null,
    Gender varchar(50) not null,
    City varchar(50) not null,
    NoHP varchar(50) not null,
    constraint PK_DimCustomer primary key (CustomerID)
);
```







```
----table DimStatusOrder
create table DimStatusOrder(
    StatusID int not null,
    StatusOrder varchar(50) not null,
    StatusOrderDesc varchar(50) not null
    constraint PK_DimStatusOrder primary key (StatusID)
);








---- table FactSalesOrder
create table FactSalesOrder (
    OrderID int not null,
    CustomerID int not null,
    ProductID int not null,
    Quantity int not null,
    Amount int not null,
    StatusID int not null,
    OrderDate date not null,
    constraint PK_FactSalesOrder primary key (OrderID),
    constraint FK_DimStatusOrder foreign key (StatusID)
    references DimStatusOrder(StatusID),
    constraint FK_DimProduct foreign key (ProductID)
    references DimProduct(ProductID),
    constraint FK_DimCustomer foreign key (CustomerID)
    references DimCustomer(CustomerID)
)

go
```

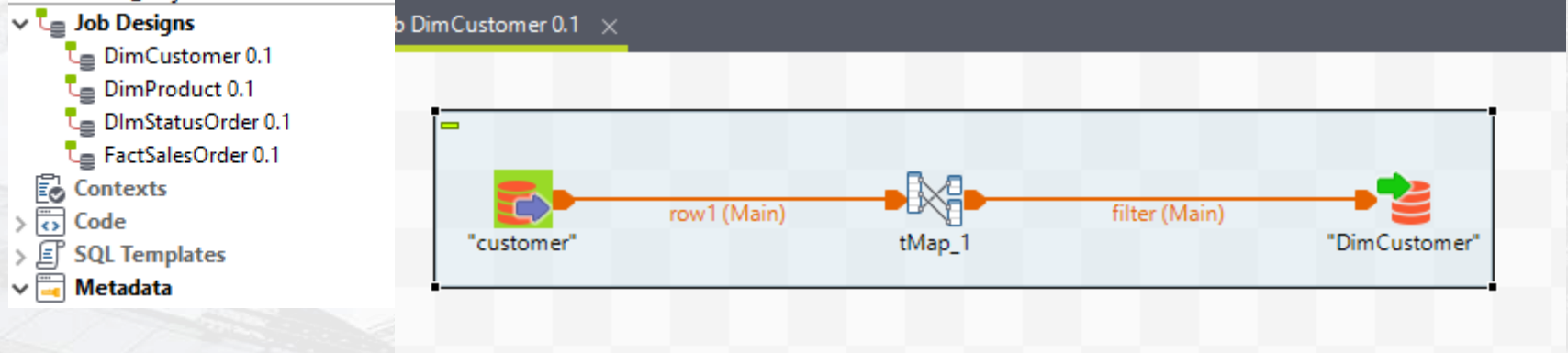
ETL Process

Membuat Job ETL di aplikasi talend untuk memindahkan data dari *Staging* ke *Data Warehouse*.

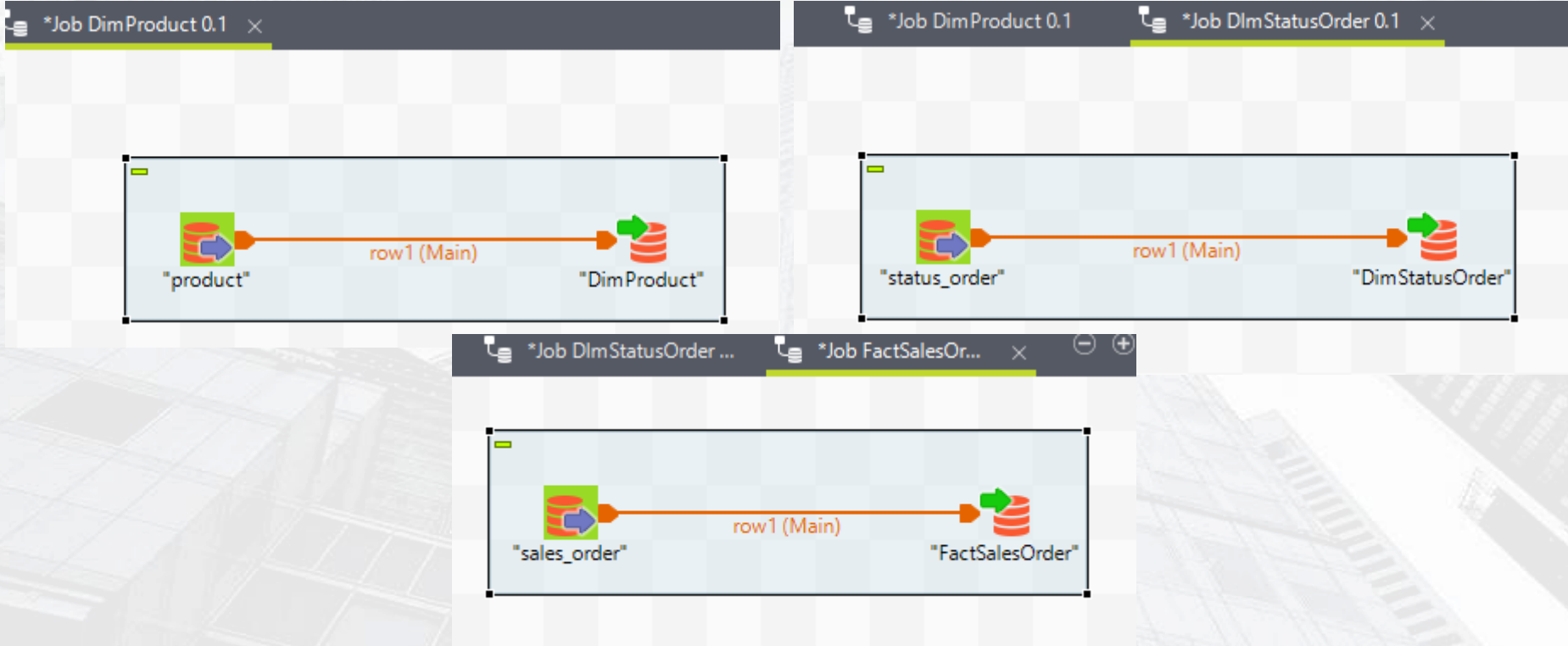
- >  SQLServer_DWH_Project 0.1
- ▼  SQLServer_Staging 0.1
 - Queries
 - Synonym schemas
 - ▼ Table schemas
 - >  customer
 - >  product
 - >  sales_order
 - >  status_order
 - View schemas

- ▼  Metadata
 - ▼  Db Connections
 - ▼  SQLServer_DWH_Project 0.1
 - Queries
 - Synonym schemas
 - ▼ Table schemas
 - >  DimCustomer
 - >  DimProduct
 - >  DimStatusOrder
 - >  FactSalesOrder
 - View schemas

Job Designs



Job Designs



Results of ETL

```
select * from DimCustomer
```

100 %

Results Messages

	CustomerID	CustomerName	Age	Gender	City	NoHP
1	201	BUDI SANTOSO	45	Pria	Jakarta	087645465712
2	202	AJENG SRIASIH	25	Wanita	Bogor	089045465712
3	203	BAGUS PRAKOSO	20	Pria	Depok	087905465712
4	204	LIA RAHMAWATI	31	Wanita	Bekasi	089945408712
5	205	AZMU FATI	28	Pria	Jakarta	087689765712
6	206	RIFKI MUHAMMAD	22	Pria	Depok	087645468907
7	207	BELA ADRILIA	24	Wanita	Tangerang	087647665712
8	208	RAHMA AMELIA	18	Wanita	Bogor	087645431212

```
select * from DimProduct
```

100 %

Results Messages

	ProductID	ProductName	ProductCategory	ProductUnitPrice
1	1001	Macbook Air 2020 13 inch	Komputer & Laptop	12000000
2	1002	T-Shirt Polo Nevada	Pakaian	150000
3	1003	Blender Philips 500 watt	Elektronik	200000
4	1004	Kipas Angin Cosmos	Elektronik	120000
5	1005	HP Elitebook 840 G4	Komputer & Laptop	10000000
6	1006	Asus Zenbook 800	Komputer & Laptop	9000000
7	1007	Luciana Set Dress 2 in 1	Pakaian	300000
8	1008	Converse Cap Original	Topi	180000
9	1009	Pull & Bear T-Shirt	Pakaian	250000
10	1010	Bagpack Navy Club	Tas	350000

Results of ETL

```
select * from DimStatusOrder
```

100 %

Results Messages

	StatusID	StatusOrder	StatusOrderDesc
1	1	Awaiting Payment	Menunggu Pembayaran
2	2	Awaiting Shipment	Menunggu Pengiriman
3	3	Shipped	Sedang Dikirim
4	4	Completed	Pesanan sampai tujuan
5	5	Cancelled	Pesanan dibatalkan oleh customer

```
select * from FactSalesOrder
```

100 %

Results Messages

	OrderID	CustomerID	ProductID	Quantity	Amount	StatusID	OrderDate
1	1301	204	1008	2	360000	2	2022-01-06
2	1302	206	1005	1	10000000	4	2022-01-20
3	1303	201	1001	1	12000000	1	2022-02-02
4	1304	202	1002	2	300000	2	2022-02-04
5	1305	203	1003	3	600000	3	2022-03-28
6	1306	206	1006	1	9000000	4	2022-03-15
7	1307	208	1009	1	250000	2	2022-03-09
8	1308	207	1007	2	600000	3	2022-04-28
9	1309	202	1010	1	350000	4	2022-04-22
10	1310	204	1004	2	240000	1	2022-04-25

Store Procedure

Membuat *Store Procedure* (SP) untuk menampilkan summary sales order berdasarkan status pengiriman.

```
----Store Procedure
create procedure summary_order_status
    (@StatusID int) as
begin
    select
        a.OrderID,
        b.CustomerName,
        c.ProductName,
        a.Quantity,
        d.StatusOrder
    from FactSalesOrder a
    inner join DimCustomer b on a.CustomerID = b.CustomerID
    inner join DimProduct c on a.ProductID = c.ProductID
    inner join DIMStatusOrder d on a.StatusID = d.StatusID
    where d.StatusID = @StatusID
end
```

```
---- exec store procedure
exec summary_order_status @StatusID =2 ;
```

```
---- exec store procedure
exec summary_order_status @StatusID =2 ;
```

100 %

Results

Messages

	OrderID	CustomerName	ProductName	Quantity	StatusOrder
1	1301	LIA RAHMAWATI	Converse Cap Original	2	Awaiting Shipment
2	1304	AJENG SRIASIH	T-Shirt Polo Nevada	2	Awaiting Shipment
3	1307	RAHMA AMELIA	Pull & Bear T-Shirt	1	Awaiting Shipment

Link Github Here



<https://github.com/zulhaji-arsyad>

Video Presentation Here

[Click of this link](#)

Thank You

