

FINAL TASK VIX

DATA ENGINEER

—

KALBE NUTRITIONALS

Presented by
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Ivan Yudha

About Me

As a graduate of Diploma in Informatics Engineering from Dian Nuswantoro University. I am currently interested in experience in the field of Data and Business Intelligence

My Experience

- Project-Based Intern: **Data Engineer**
Virtual Internship Experience at Kalbe
Nutritionals x Rakamin Academy
- Customer Care
Telkomsel
- Software Engineering
BPBD Provinsi Jawa Tengah

Create shell/bash

Create a shell/bash script to check whether directory exists inside a given path.

```
GNU nano 6.2                                check_directory.sh
#!/bin/bash

path="/hdfs/data/data1"
name_of_directory="data1"

filename_excel="daily_market_price.xlsx"
source_dir="/local/data/market"
target_dir="$path/$name_of_directory"

if [ -d "$target_dir" ]; then
    echo "There is $name_of_directory Directory Exist!"

    if [ -f "$source_dir/$filename_excel" ]; then
        cp "$source_dir/$filename_excel" "$target_dir/"
        echo "File $filename_excel copied to $target_dir"

        log_file="$target_dir/log.txt"
        echo "File Moved Successfully" > "$log_file"
        echo "Log Created at: $log_file"
    else
        echo "File $filename_excel not found in source directory"
    fi
else
    echo "$name_of_directory Directory Not Exist!"
    mkdir "$target_dir"
    echo "Created $name_of_directory directory inside $path"
fi
```

1. nano check_directory.sh (untuk membuat skrip tersebut dengan variable bernama check_directory.sh)
2. Crontab -e, untuk membuat skrip berjalan setiap jam 7 AM

```
/mnt/c/WINDOWS/system32$ crontab -e
```

```
# m h dom mon dow   command
0 7 * * * /path/to/check_directory.sh
```

Python to PostgreSQL

Python connection to PostgreSQL

```
1 #melakukan import psycopg2 (PostgreSQL)
2 import psycopg2
3
4 #informasi koneksi PostgreSQL
5 host = 'localhost'
6 database = 'KARYAWAN'
7 user = 'ivan'
8 password = 'ivanyudha'
9
10 #melakukan percobaan koneksi
11 conn = psycopg2.connect(
12     host=host,
13     database=database,
14     user=user,
15     password=password
16 )
17
18 #membuat object cursor sebagai penanda
19 cursor = conn.cursor()
20
21 #deklarasi SQL query untuk memasukan record ke DB (KARYAWAN)
22 insert_sql = (
23     'INSERT INTO KARYAWAN (FIRST_NAME, LAST_NAME, AGE, SEX, INCOME)'
24     'VALUES ()'
25 )
26 values = ('Rizki', 'Ridho', 23, 'Pria', 4000000)
27
28 try:
29     #eksekusi SQL Command
30     cursor.execute(insert_sql, values)
31
32     #melakukan perubahan (commit) pada DB
33     conn.commit()
34
35 except:
36     #roll back apabila ada issue
37     conn.rollback()
38
39 #menutup koneksi
40 finally:
41     if conn:
42         conn.close()
```

1. Install psycopg2 via terminal or command prompt (pip install psycopg2)
2. Create a Python connection to PostgreSQL using psycopg2

Create Database

Create an inventory table and display item_name which has the highest number item_total

```
Query Query History
1 create table Inventaris (
2     Item_code character varying (55) primary key,
3     Item_name character varying (255),
4     Item_price character varying,
5     Item_total character varying
6 )
```

Data Output Messages Notifications

CREATE TABLE

Query returned successfully in 69 msec.

```
Query Query History
1 select item_name
2 from inventaris
3 order by item_total desc
4 limit 1;
```

Data Output Messages Notifications

	item_name character varying (255)
1	Blackmores Vit C 500Mg

1. If adding another item_name with item_code 2343 then it cannot be done, because the code already exists and is used as the primary key
2. Remove the lowest item_name item_total number

```
Query Query History
1 delete from inventaris
2 where item_total = (select min(item_total) from inventaris)
```


Where

Query to show customers whose purchase amount is less than 100 or exclude orders whose order date is on or later than August 25, 2022 and customer id is above 2001

Query










Query History

```
1 select *
2 from customer_orders
3 where (purchase_amount < 100 or purchase_amount is null)
4 and order_date >= '2002-08-25'
5 and customer_id > 2001
```

Data Output

Messages

Notifications



	order_no integer	purchase_amount integer	order_date date	customer_id integer	salesman_id integer
1	10002	65	2022-10-05	2002	3001

Solution

Please explain what's wrong in this image and provide the best solution for this case.

dbo. FormN 168

ddlPlant (nvarchar(max), null)
ddlPTBU (nvarchar(max), null)
ddlReqBU (nvarchar(max), null)
ddlReqLOB (nvarchar(max), null)
ddlReqLokasi (nvarchar(max), null)
ddlReqLokasiAstTetap (nvarchar(max), null)
ddlReqLokasiKategori (nvarchar(max), null)
ddlReqOnBU (nvarchar(max), null)
ddlRequestType (nvarchar(max), null)
ddlTypeofClaim (nvarchar(max), null)
ddlTypeofPurchase (nvarchar(max), null)

	ddlPlant	ddlReqBU	ddlReqLOB	ddlReqLokasiKategori	ddlReqOnBU	ddlRequestType	ddlTypeofClaim	ddlTypeofPurchase
1	Surabaya	DSI	Downstream	HO	DSI	Modern Trade PO	Promotional Claim	Non PO
2	Surabaya	DSI	Downstream	HO	DSI	Modern Trade PO	Promotional Claim	Non PO
3	Belawan	DSI	Downstream	HO	DSI	Modern Trade PO	Promotional Claim	Non PO

General Information

Request Type * Modern Trade PO

Plant * Belawan

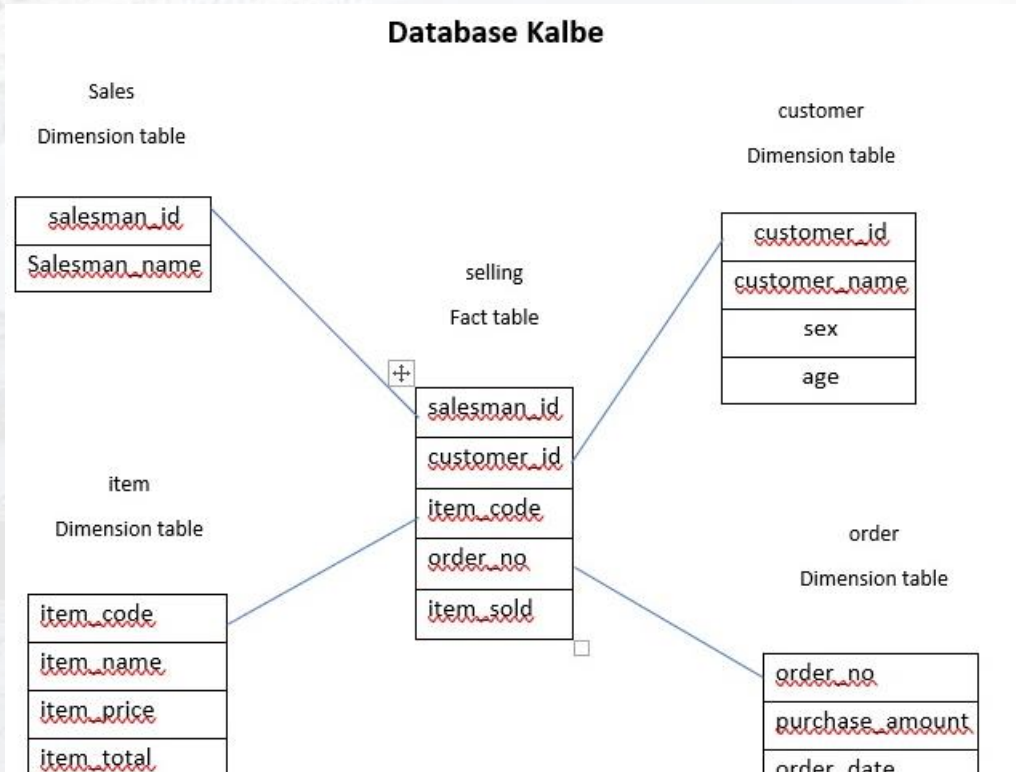
From the picture above, there is an output error given, the output should be "Surabaya" because the parameter (nvarchar(max),null) will produce the maximum value in the ddlPlant variable.

Star Schema

Star Schema has one dimension table for each dimension, which contains a set of attributes. The fact table in the middle contains the keys for each dimension and attribute such as sales and units sold. This schema can cause data redundancy because each dimension has only one dimension table.

Star Schema

simple star schema example for Kalbe database consisting of 1 fact and 5 dimensions using Data Mode Theory



Video Presentation

<https://drive.google.com/file/d/11tcHCUZWnn9cssw4cBYhAMXRcMd9Tqdm/view?usp=sharing>

Thank You



Rakamin
Academy



KALBE
Nutritional