**JUDUL**

RA’Laundry

**ABSTRAK**

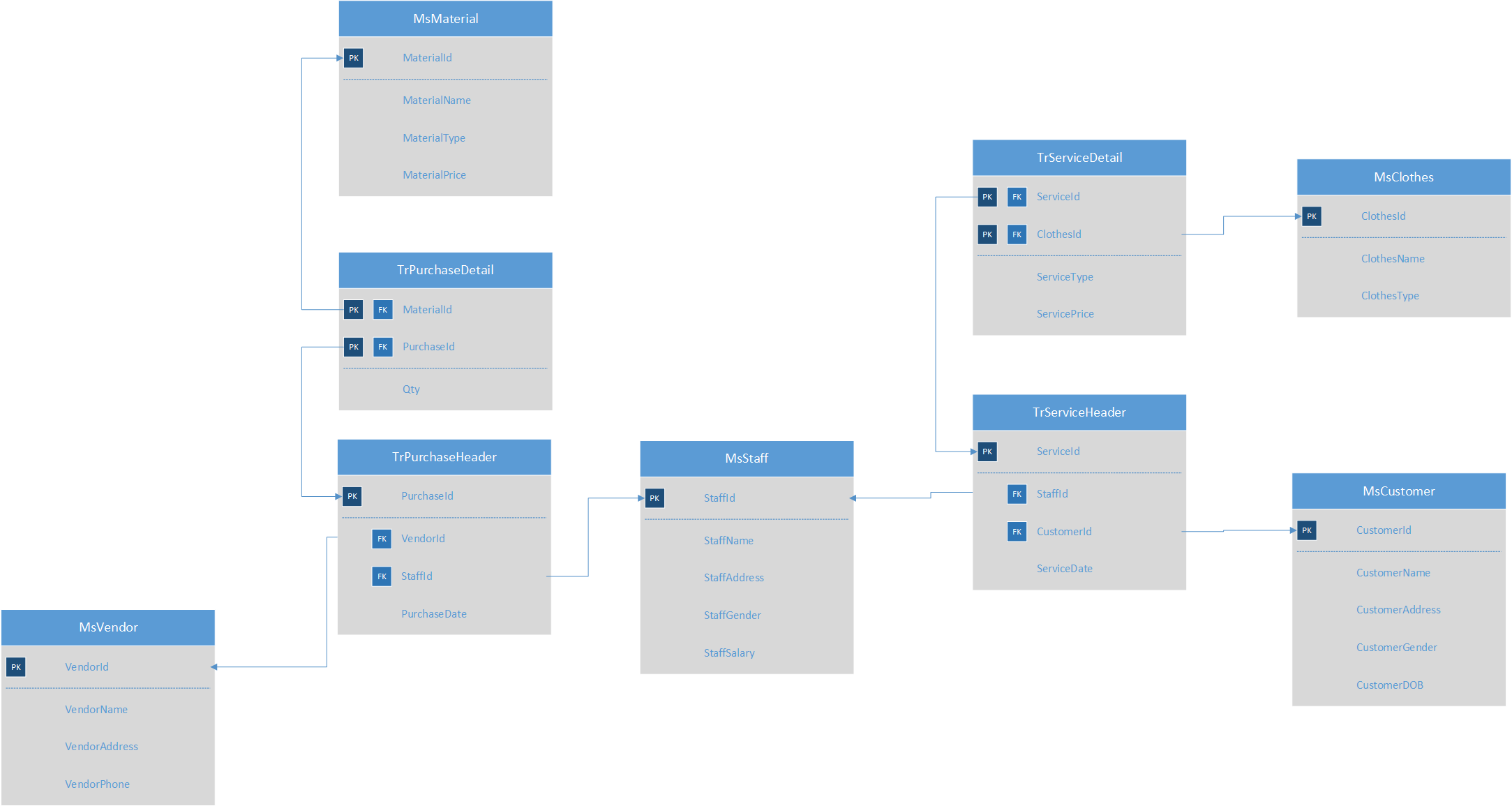
RA’Laundry adalah sebuah toko laundry yang menyimpan data secara otomatis dalam *database*, RA’Laundry memiliki 2 transaksi, seperti transaksi servis dan transaksi pembelian. Tranksasi servis adalah transaksi ketika *customer* ingin mencuci baju, dan transaksi pembelian adalah transaksi ketika RA’Laundry ingin membeli *material* dari *vendor*. Dalam projek ini, terdapat beberapa *query* yang dapat digunakan untuk mempermudah transaksi yang terjadi dalam RA’Laundry, *query* tersebut seperti, *query* untuk membuat *database*, *query* untuk memasukkan data yang ada, *query* untuk transaksi yang terjadi, dan beberapa *query case* yang dapat digunakan oleh RA’Laundry tersebut, diharapkan dari projek ini, RA’Laundry akan menjadi lebih mudah dan lebih cepat memasukkan data transaksi ke dalam *database* miliknya. Projek ini menghasilkan 4 .sql *file*, 1 png *file*, 1 vsdx *file*, dan 1 docx *file*.

**PENDAHULUAN**

RA’Laundry adalah sebuah projek untuk menguji pengetahuan mahasiswa mengenai Database Systems, karena perlu memiliki pengetahuan dan keahlian yang mencukupi untuk menciptakan struktur *database* melalui ERD, agar tidak terjadi anomali data saat dimasukkan, dan keahlian membuat *query* agar dapat mengaplikasikannya di dunia kerja sesunguhnya,

Semua hal yang dilakukan, mulai dari pembuatan ERD, pembuatan *query insert* ke dalam *database*, hingga *query case*, menguji aspek yang ada dalam *database*, mulai dari keamanan, redundansi data, dan efisiensi *query*. Aspek-aspek ini sangat penting dan berguna saat mengaplikasikannya di dunia kerja karena banyaknya masalah yang dihadapi di dunia kerja, apalagi data yang sekarang ini sangat popular adalah *Big Data*, yaitu data yang berjumlah hingga miliaran data, sehingga efisiensi *query* dan penggunaan *database* yang cepat dan aman, karena data yang diproses sangat banyak dan diperlukannya ketepatan data yang masuk ke dalam *database*. Diharapkan dari projek ini, mahasiswa dapat mempelajari dan mempraktekkan pengetahuan yang dimilikinya untuk menciptakan sistem *database* yang efisien, rapi, cepat, dan aman.

**DOKUMENTASI**

1. Entity Relationship Diagram (ERD)
2. Create.sql

CREATE DATABASE RALaundry

USE RALaundry

-- Master Tables --

CREATE TABLE MsStaff (

StaffId CHAR(5) PRIMARY KEY

CHECK (StaffID LIKE 'ST[0-9][0-9][0-9]'),

StaffName VARCHAR(MAX) NOT NULL,

StaffAddress VARCHAR(MAX) NOT NULL,

StaffGender VARCHAR(6) NOT NULL

CHECK (StaffGender LIKE 'Male' OR StaffGender LIKE 'Female'),

StaffSalary INT NOT NULL

CHECK (StaffSalary BETWEEN 1500000 AND 3000000)

)

CREATE TABLE MsCustomer (

CustomerId CHAR(5) PRIMARY KEY

CHECK (CustomerID LIKE 'CU[0-9][0-9][0-9]'),

CustomerName VARCHAR(MAX) NOT NULL,

CustomerAddress VARCHAR(MAX) NOT NULL,

CustomerGender VARCHAR(6)

CHECK (CustomerGender LIKE 'Male' OR CustomerGender LIKE 'Female'),

CustomerDOB DATE NOT NULL

)

CREATE TABLE MsVendor (

VendorId CHAR(5) PRIMARY KEY

CHECK (VendorID LIKE 'VE[0-9][0-9][0-9]'),

VendorName VARCHAR(MAX) NOT NULL,

VendorAddress VARCHAR(MAX) NOT NULL

CHECK (LEN(VendorAddress) > 10),

VendorPhoneNumber VARCHAR(MAX) NOT NULL

)

CREATE TABLE MsMaterial (

MaterialId CHAR(5) PRIMARY KEY

CHECK (MaterialID LIKE 'MA[0-9][0-9][0-9]'),

MaterialName VARCHAR(MAX) NOT NULL,

MaterialType VARCHAR(9)

CHECK (MaterialType LIKE 'Equipment' OR MaterialType LIKE 'Supplies'),

MaterialPrice INT NOT NULL

)

CREATE TABLE MsClothes (

ClothesId CHAR(5) PRIMARY KEY

CHECK (ClothesID LIKE 'CL[0-9][0-9][0-9]'),

ClothesName VARCHAR(MAX) NOT NULL,

ClothesType VARCHAR(9)

CHECK (ClothesType IN ('Cotton', 'Viscose', 'Polyester', 'Linen', 'Wool'))

)

-- Transaction Tables --

CREATE TABLE TrPurchaseHeader (

PurchaseId CHAR(5) PRIMARY KEY

CHECK(PurchaseId LIKE 'PU[0-9][0-9][0-9]'),

StaffId CHAR(5)

FOREIGN KEY REFERENCES MsStaff(StaffId),

VendorId CHAR(5)

FOREIGN KEY REFERENCES MsVendor(VendorId),

PurchaseDate DATE NOT NULL

CHECK(YEAR(PurchaseDate) = '2019')

)

CREATE TABLE TrServiceHeader (

ServiceId CHAR(5) PRIMARY KEY

CHECK(ServiceId LIKE 'SR[0-9][0-9][0-9]'),

StaffId CHAR(5)

FOREIGN KEY REFERENCES MsStaff(StaffId),

CustomerId CHAR(5)

FOREIGN KEY REFERENCES MsCustomer(CustomerId),

ServiceDate DATE NOT NULL

CHECK(YEAR(ServiceDate) = '2019')

)

-- Transaction Detail Tables

CREATE TABLE TrPurchaseDetail (

PurchaseId CHAR(5)

FOREIGN KEY REFERENCES TrPurchaseHeader(PurchaseId),

MaterialId CHAR(5)

FOREIGN KEY REFERENCES MsMaterial(MaterialId),

Quantity INT NOT NULL

PRIMARY KEY(PurchaseId,MaterialId)

)

CREATE TABLE TrServiceDetail (

ServiceId CHAR(5) NOT NULL

FOREIGN KEY REFERENCES TrServiceHeader(ServiceId),

ClothesId CHAR(5) NOT NULL

FOREIGN KEY REFERENCES MsClothes(ClothesId),

ServiceType VARCHAR(MAX)

CHECK (ServiceType IN ('Laundry Service', 'Dry Cleaning Service', 'Ironing Service')),

ServicePrice INT

PRIMARY KEY(ServiceId, ClothesId)

)

1. Insert.sql

USE RALaundry

-- Master Tables –

INSERT INTO MsStaff

VALUES

('ST001', 'Alice', 'Wonderland Street', 'Female', 3000000),

('ST002', 'Judith Crystal', 'Sand Avenue', 'Female', 1500000),

('ST003', 'Iris Blackhorse', 'Spirit Street', 'Female', 2000000),

('ST004', 'Veronica Valkyrie', 'Heaven Mount', 'Female', 1700000),

('ST005', 'Pireo en Coig', 'Winter Port', 'Male', 1600000),

('ST006', 'Oodea Weiss', 'Sunshine Peak', 'Male', 1500000),

('ST007', 'Monrek', 'Moonlight Island', 'Male', 2900000),

('ST008', 'Salma Terema', 'Spring Palace', 'Female', 2300000),

('ST009', 'Chloe Roze Blueheart', 'Rose Suite', 'Female', 1700000),

('ST010', 'Louise Domain', 'Emerald Square', 'Male', 1700000),

('ST011', 'Joshua Tower', 'Green Tower', 'Male', 2000000),

('ST012', 'Susan von Nema', 'Magic Street', 'Female', 1500000),

('ST013', 'Gristrell', 'Candy Mount', 'Male', 2800000),

('ST014', 'Saya Gritenia', 'Chrome Road', 'Female', 1800000),

('ST015', 'Romeo Ruitt', 'Sword Island', 'Male', 1500000),

('ST016', 'Hansoon Bluebird', 'Sparkling Apartment', 'Male', 1500000),

('ST017', 'Xeros Dagger', 'Keyblade Street', 'Male', 2100000)

INSERT INTO MsCustomer

VALUES

('CU001', 'Edema Nocturn', 'Summer Street', 'Male', '1 March 1998'),

('CU002', 'Fedhir Yoma', 'Ice Mount', 'Male', '28 August 1993'),

('CU003', 'Lana Merelia', 'Chocolate Island', 'Female', '11 May 1995'),

('CU004', 'Kurenaro Mirror', 'Fantasy Street', 'Female', '24 November 2000'),

('CU005', 'Kris Voyur', 'Dream Square', 'Male', '25 December 1999'),

('CU006', 'Jean Ann', 'Twinkle Port', 'Male', '4 May 2003'),

('CU007', 'Bianca', 'Demon Apartment', 'Female', '27 November 2001'),

('CU008', 'Teo White', 'Rhime Street', 'Male', '10 October 2000'),

('CU009', 'Leo Netherland', 'Joyous Peak', 'Male', '13 January 1995'),

('CU010', 'Sushi Queen', 'Earth Road', 'Female', '21 September 2001'),

('CU011', 'Pom Pom', 'Hell Street', 'Female', '18 February 2000'),

('CU012', 'Mo Yan', 'Tir Na Nog Avenue', 'Male', '7 July 2000'),

('CU013', 'Ruth von Serrena', 'Blade Mount', 'Female', '11 December 2006'),

('CU014', 'Jin Hail', 'Fall Island', 'Male', '15 February 1970'),

('CU015', 'Yui Forsaken', 'Pink Street', 'Female', '10 November 1969'),

('CU016', 'Derith', 'Star Palace', 'Male', '1 April 2005'),

('CU017', 'Shana Forest', 'Twilight Street', 'Female', '16 June 2002')

INSERT INTO MsVendor

VALUES

('VE001', 'PT. Blue Disk', 'First Avenue', '081256473828'),

('VE002', 'South Tide Co.', 'Second Avenue', '087899337483'),

('VE003', 'Black Diamond Shop', 'Third Avenue', '081274732288'),

('VE004', 'Pin Ball Co.', 'Fourth Avenue', '081273899299'),

('VE005', 'PT. Lipopotamus', 'Fifth Avenue', '087892843377'),

('VE006', 'Keymaster Co.', 'Sixth Avenue', '081233336488'),

('VE007', 'Twin Shop', 'Seventh Avenue', '081277440399'),

('VE008', 'Honey Sake Shop', 'Eighth Avenue', '081200003757'),

('VE009', 'Magic Co.', 'Ninth Avenue', '087874993288'),

('VE010', 'PT. Coastline', 'Tenth Avenue', '081222893722'),

('VE011', 'Death Scythe Shop', 'Eleventh Avenue', '081257002837'),

('VE012', 'Dreamland Co.', 'Twelfth Avenue', '081255770002'),

('VE013', 'Gold Block Shop', 'Thirteenth Avenue', '081245670987'),

('VE014', 'Ringroad Co.', 'Fourteenth Avenue', '081257397677'),

('VE015', 'PT. Angke', 'Fifteenth Avenue', '087847205747'),

('VE016', 'Crossroad Shop', 'Sixteenth Avenue', '087826664992'),

('VE017', 'Star Co.', 'Seventeenth Avenue', '081285638866')

INSERT INTO MsMaterial

VALUES

('MA001', 'Star', 'Equipment', 13000),

('MA002', 'Moonlight', 'Equipment', 17000),

('MA003', 'Dust', 'Supplies', 17000),

('MA004', 'Sand', 'Equipment', 21000),

('MA005', 'Rock', 'Equipment', 13000),

('MA006', 'Lava', 'Equipment', 17000),

('MA007', 'Tree', 'Supplies', 13000),

('MA008', 'Snow', 'Supplies', 21000),

('MA009', 'Rain', 'Equipment', 17000),

('MA010', 'Cloud', 'Supplies', 21000),

('MA011', 'Stone', 'Equipment', 21000),

('MA012', 'Ice', 'Supplies', 13000),

('MA013', 'Rainbow', 'Supplies', 17000),

('MA014', 'Gold', 'Equipment', 21000),

('MA015', 'Powder', 'Equipment', 13000),

('MA016', 'Silver', 'Supplies', 21000),

('MA017', 'Ink', 'Equipment', 17000)

INSERT INTO MsClothes

VALUES

('CL001', 'Kitten Jacket', 'Cotton'),

('CL002', 'Rabbit T-Shirt', 'Wool'),

('CL003', 'Puppy Polo', 'Linen'),

('CL004', 'Crocodile Sweater', 'Cotton'),

('CL005', 'Shark Shirt', 'Linen'),

('CL006', 'Bunny Hoodie', 'Wool'),

('CL007', 'Hippo Polo', 'Polyester'),

('CL008', 'Fish Shirt', 'Linen'),

('CL009', 'Cow Jacket', 'Cotton'),

('CL010', 'Butterfly Shirt', 'Viscose'),

('CL011', 'Platypus T-Shirt', 'Linen'),

('CL012', 'Dog Sweater', 'Cotton'),

('CL013', 'Lion Jacket', 'Viscose'),

('CL014', 'Giraffe Hoodie', 'Wool'),

('CL015', 'Goat Shirt', 'Linen'),

('CL016', 'Ladybug Sweater', 'Cotton'),

('CL017', 'Hedgehog Hoodie', 'Polyester')

-- Transaction Tables –

INSERT INTO TrPurchaseHeader

VALUES

('PU001', 'ST001', 'VE010', '9 January 2019'),

('PU002', 'ST009', 'VE014', '15 February 2019'),

('PU003', 'ST004', 'VE008', '18 February 2019'),

('PU004', 'ST013', 'VE006', '3 March 2019'),

('PU005', 'ST008', 'VE007', '1 April 2019'),

('PU006', 'ST015', 'VE012', '20 April 2019'),

('PU007', 'ST015', 'VE001', '20 April 2019'),

('PU008', 'ST011', 'VE001', '8 May 2019'),

('PU009', 'ST010', 'VE015', '15 May 2019'),

('PU010', 'ST011', 'VE001', '28 May 2019'),

('PU011', 'ST011', 'VE002', '28 May 2019'),

('PU012', 'ST011', 'VE011', '28 May 2019'),

('PU013', 'ST011', 'VE014', '28 May 2019'),

('PU014', 'ST016', 'VE004', '1 June 2019'),

('PU015', 'ST004', 'VE008', '10 June 2019'),

('PU016', 'ST004', 'VE014', '10 June 2019'),

('PU017', 'ST004', 'VE016', '10 June 2019'),

('PU018', 'ST002', 'VE010', '30 June 2019'),

('PU019', 'ST001', 'VE017', '2 July 2019'),

('PU020', 'ST013', 'VE011', '8 July 2019'),

('PU021', 'ST001', 'VE011', '13 July 2019'),

('PU022', 'ST014', 'VE014', '21 July 2019'),

('PU023', 'ST013', 'VE009', '26 July 2019'),

('PU024', 'ST016', 'VE013', '10 August 2019'),

('PU025', 'ST007', 'VE005', '31 October 2019'),

('PU026', 'ST011', 'VE001', '10 November 2019'),

('PU027', 'ST004', 'VE008', '24 November 2019'),

('PU028', 'ST009', 'VE015', '12 December 2019'),

('PU029', 'ST009', 'VE014', '17 December 2019')

INSERT INTO TrServiceHeader

VALUES

('SR001', 'ST007', 'CU001', '1 January 2019'),

('SR002', 'ST003', 'CU010', '14 February 2019'),

('SR003', 'ST014', 'CU014', '17 March 2019'),

('SR004', 'ST010', 'CU016', '28 March 2019'),

('SR005', 'ST007', 'CU012', '16 April 2019'),

('SR006', 'ST001', 'CU005', '27 April 2019'),

('SR007', 'ST013', 'CU014', '9 May 2019'),

('SR008', 'ST017', 'CU002', '11 May 2019'),

('SR009', 'ST006', 'CU011', '23 May 2019'),

('SR010', 'ST013', 'CU006', '2 June 2019'),

('SR011', 'ST005', 'CU003', '12 June 2019'),

('SR012', 'ST009', 'CU009', '22 June 2019'),

('SR013', 'ST015', 'CU002', '7 July 2019'),

('SR014', 'ST017', 'CU014', '10 July 2019'),

('SR015', 'ST002', 'CU013', '13 July 2019'),

('SR016', 'ST008', 'CU008', '22 July 2019'),

('SR017', 'ST011', 'CU015', '4 August 2019'),

('SR018', 'ST016', 'CU007', '22 September 2019'),

('SR019', 'ST012', 'CU017', '10 October 2019'),

('SR020', 'ST004', 'CU008', '27 November 2019'),

('SR021', 'ST003', 'CU004', '9 December 2019')

-- Transaction Detail Tables --

INSERT INTO TrPurchaseDetail

VALUES

('PU001', 'MA004', '3'),

('PU001', 'MA013', '4'),

('PU002', 'MA007', '20'),

('PU002', 'MA017', '1'),

('PU003', 'MA001', '2'),

('PU003', 'MA016', '19'),

('PU004', 'MA005', '5'),

('PU004', 'MA011', '3'),

('PU005', 'MA008', '2'),

('PU005', 'MA012', '4'),

('PU006', 'MA013', '8'),

('PU006', 'MA007', '19'),

('PU007', 'MA013', '2'),

('PU007', 'MA004', '1'),

('PU008', 'MA016', '21'),

('PU008', 'MA011', '6'),

('PU009', 'MA014', '6'),

('PU009', 'MA008', '4'),

('PU009', 'MA001', '1'),

('PU010', 'MA010', '17'),

('PU010', 'MA013', '7'),

('PU011', 'MA003', '3'),

('PU011', 'MA002', '2'),

('PU012', 'MA009', '1'),

('PU012', 'MA006', '2'),

('PU013', 'MA015', '1'),

('PU013', 'MA002', '3'),

('PU014', 'MA002', '1'),

('PU014', 'MA006', '2'),

('PU015', 'MA001', '1'),

('PU015', 'MA003', '3'),

('PU016', 'MA009', '1'),

('PU016', 'MA006', '2'),

('PU017', 'MA010', '7'),

('PU017', 'MA011', '4'),

('PU017', 'MA001', '6'),

('PU018', 'MA007', '4'),

('PU018', 'MA005', '2'),

('PU019', 'MA014', '17'),

('PU019', 'MA017', '5'),

('PU020', 'MA010', '18'),

('PU020', 'MA012', '2'),

('PU021', 'MA016', '20'),

('PU021', 'MA017', '1'),

('PU022', 'MA012', '3'),

('PU022', 'MA013', '4'),

('PU023', 'MA012', '5'),

('PU023', 'MA011', '1'),

('PU024', 'MA009', '2'),

('PU024', 'MA016', '7'),

('PU025', 'MA002', '5'),

('PU025', 'MA010', '3'),

('PU026', 'MA008', '2'),

('PU026', 'MA010', '4'),

('PU027', 'MA013', '5'),

('PU027', 'MA003', '4'),

('PU028', 'MA014', '2'),

('PU028', 'MA003', '1'),

('PU029', 'MA009', '8'),

('PU029', 'MA017', '6')

INSERT INTO TrServiceDetail

VALUES

('SR001', 'CL006', 'Laundry Service', 25000),

('SR001', 'CL013', 'Laundry Service', 29000),

('SR002', 'CL004', 'Ironing Service', 8000),

('SR002', 'CL001', 'Dry Cleaning Service', 33000),

('SR003', 'CL002', 'Ironing Service', 28000),

('SR003', 'CL011', 'Dry Cleaning Service', 27000),

('SR004', 'CL001', 'Laundry Service', 27000),

('SR004', 'CL012', 'Ironing Service', 25000),

('SR005', 'CL009', 'Laundry Service', 10000),

('SR005', 'CL005', 'Laundry Service', 30000),

('SR006', 'CL014', 'Ironing Service', 32000),

('SR006', 'CL011', 'Dry Cleaning Service', 37000),

('SR007', 'CL004', 'Ironing Service', 8000),

('SR007', 'CL008', 'Laundry Service', 21000),

('SR008', 'CL011', 'Laundry Service', 15000),

('SR008', 'CL002', 'Laundry Service', 26000),

('SR009', 'CL017', 'Dry Cleaning Service', 24000),

('SR009', 'CL015', 'Laundry Service', 11000),

('SR010', 'CL009', 'Dry Cleaning Service', 7000),

('SR010', 'CL003', 'Ironing Service', 23000),

('SR011', 'CL007', 'Laundry Service', 27000),

('SR011', 'CL003', 'Laundry Service', 28000),

('SR012', 'CL016', 'Ironing Service', 13000),

('SR012', 'CL017', 'Laundry Service', 17000),

('SR013', 'CL011', 'Ironing Service', 25000),

('SR013', 'CL002', 'Dry Cleaning Service', 26000),

('SR014', 'CL002', 'Laundry Service', 28000),

('SR014', 'CL017', 'Laundry Service', 31000),

('SR015', 'CL004', 'Ironing Service', 32000),

('SR015', 'CL016', 'Laundry Service', 9000),

('SR016', 'CL017', 'Laundry Service', 15000),

('SR016', 'CL002', 'Laundry Service', 20000),

('SR017', 'CL001', 'Dry Cleaning Service', 20000),

('SR017', 'CL008', 'Ironing Service', 21000),

('SR018', 'CL001', 'Laundry Service', 20000),

('SR018', 'CL013', 'Laundry Service', 33000),

('SR019', 'CL007', 'Ironing Service', 30000),

('SR019', 'CL009', 'Laundry Service', 10000),

('SR020', 'CL002', 'Dry Cleaning Service', 25000),

('SR020', 'CL011', 'Laundry Service', 17000),

('SR021', 'CL010', 'Ironing Service', 13000),

('SR021', 'CL007', 'Laundry Service', 11000)

1. Simulation.sql

USE RALaundry

--- D. Simulasikan proses service dan purchase transaction

--- SERVICE

--- Cerita :

--- Seorang customer bernama Amethyst Pops,

--- keterangan profil :

--- Customer Name : Amethyst Pops

--- Customer Address : Boundless Edge

--- Customer Gender : Gender Male

--- Customer DOB : 3 Januari 2004

--- ingin mencuci 2 bajunya di RALaundry, yaitu

--- "Fox Jacket" dengan tipe baju Polyester

--- "Swallowtail Shirt" dengan tipe baju Linen

--- ia ingin kedua bajunya di laundry dengan ServiceType "Laundry Service".

--- Transaksi terjadi pada tanggal 9 September 2019

--- oleh staff ST017 (Xeros Dagger)

--- dan ternyata harga dari servicenya yaitu

--- "Fox Jacket" seharga 29000

--- "Swallowtail Shirt" seharga 21000

--- Simulasi :

--- 1. Insert data Customer

INSERT INTO MsCustomer

VALUES

('CU018', 'Amethyst Pops', 'Boundless Edge', 'Male', '3 January 2004')

--- 2. Insert data Clothes / baju yang ingin dicuci

INSERT INTO MsClothes

VALUES

('CL018', 'Fox Jacket', 'Polyester'),

('CL019', 'Swallowtail Shirt', 'Linen')

--- 3. Insert data transaksi servis (Staffnya ST017 - Xeros Dagger)

INSERT INTO TrServiceHeader

VALUES

('SR022', 'ST017', 'CU018', '9 September 2019')

--- 4. Insert detail dari transaksi servis

INSERT INTO TrServiceDetail

VALUES

('SR022', 'CL018', 'Laundry Service', 29000),

('SR022', 'CL019', 'Laundry Service', 21000)

--- PURCHASE

--- Cerita :

--- Stok Material di RALaundry mulai habis maka dari itu,

--- RALaundry memesan Material baru bernama "Elixir"

--- sebanyak 16 pcs

--- pada tanggal 19 Desember 2019.

--- Harga "Elixir" yaitu 21000 per pc

--- dengan Material Type "Supplies"

--- dari sebuah vendor baru bernama PT. Magna Exceed,

--- keterangan profil :

--- Vendor Name : PT. Magna Exceed

--- Vendor Address : Eighteenth Avenue

--- Vendor Phone : 087842491781

--- Selain itu, Staff yang mengurus pemesanan tersebut adalah

--- seorang staff baru bernama Anesthesia Virgo,

--- keterangan profil :

--- Staff Name : Anesthesia Virgo

--- Staff Address : Starmoon Valley

--- Staff Gender : Female

--- Staff Salary : 1500000

--- Selain Elixir, RALaundry juga memesan 20 pcs Lava dari PT. Magna Exceed

--- Simulasi :

--- 1. Insert data Material / barang yang ingin dibeli

INSERT INTO MsMaterial

VALUES

('MA018', 'Elixir', 'Supplies', 21000)

--- 2. Insert data Staff

INSERT INTO MsStaff

VALUES

('ST018', 'Anesthesia Virgo', 'Starmoon Valley', 'Female', 1500000)

--- 3. Insert data Vendor

INSERT INTO MsVendor

VALUES

('VE018', 'PT. Magna Exceed', 'Eighteenth Avenue', '087842491781')

--- 4. Insert data transaksi pembelian

INSERT INTO TrPurchaseHeader

VALUES

('PU030', 'ST018', 'VE018','19 December 2019')

--- 5. Insert detail dari transaksi pembelian

INSERT INTO TrPurchaseDetail

VALUES

('PU030', 'MA018', 16),

('PU030', 'MA006', 20)

1. Case.sql

USE RALaundry

-- Soal 1 --

SELECT MC.CustomerId,

CustomerName,

[TotalServicePrice] = SUM(TSD.ServicePrice)

FROM MsCustomer MC

JOIN TrServiceHeader TSH ON MC.CustomerId = TSH.CustomerId

JOIN TrServiceDetail TSD ON TSH.ServiceId = TSD.ServiceId

WHERE DATENAME(MONTH, TSH.ServiceDate) = 'July' AND

CustomerGender LIKE 'Male'

GROUP BY MC.CustomerId, CustomerName

-- Soal 2 --

SELECT MS.StaffName,

PurchaseDate,

[TotalTransaction] = COUNT(PurchaseId)

FROM MsStaff MS

JOIN TrPurchaseHeader TPH ON MS.StaffId = TPH.StaffId

WHERE MS.StaffName LIKE '%o%'

GROUP BY MS.StaffName, PurchaseDate

HAVING COUNT(PurchaseId) > 1

-- Soal 3 --

SELECT VendorName,

[PurchaseDate] = CONVERT(NVARCHAR, PurchaseDate, 107),

[TotalTransaction] = COUNT(TPH.PurchaseId),

[TotalPurchasePrice] = SUM(Quantity\*MaterialPrice)

FROM MsVendor MV

JOIN TrPurchaseHeader TPH ON MV.VendorId = TPH.VendorId

JOIN TrPurchaseDetail TPD ON TPH.PurchaseId = TPD.PurchaseId

JOIN MsMaterial MM ON MM.MaterialId = TPD.MaterialId

WHERE VendorName LIKE 'PT. %' AND

DAY(PurchaseDate) % 2 = 1

GROUP BY VendorName, PurchaseDate

-- Soal 4 --

SELECT StaffName,

MaterialName,

[TotalTranscation] = COUNT(TPH.PurchaseId),

[TotalQuantity] = CAST(SUM(Quantity) AS VARCHAR) + ' pcs'

FROM TrPurchaseHeader TPH

JOIN MsStaff MS ON MS.StaffId = TPH.StaffId

JOIN TrPurchaseDetail TPD ON TPD.PurchaseId = TPH.PurchaseId

JOIN MsMaterial MM ON MM.MaterialId = TPD.MaterialId

WHERE DATENAME(MONTH, PurchaseDate) = 'July'

GROUP BY StaffName, MaterialName

HAVING SUM(Quantity) < 9

-- Soal 5 --

SELECT [MaterialId] = STUFF(MM.MaterialId, 1, 2, 'Material'),

[MaterialName] = UPPER(MaterialName),

PurchaseDate,

Quantity

FROM MsMaterial MM

JOIN TrPurchaseDetail TPD ON TPD.MaterialId = MM.MaterialId

JOIN (

SELECT PurchaseId, PurchaseDate

FROM TrPurchaseHeader

) AS A ON A.PurchaseId = TPD.PurchaseId

WHERE Quantity > (

SELECT AVG(Quantity)

FROM TrPurchaseDetail

) AND MaterialType = 'Supplies'

ORDER BY MM.MaterialId

-- Soal 6 --

SELECT StaffName,

CustomerName,

[ServiceDate] = CONVERT(NVARCHAR, ServiceDate, 106)

FROM TrServiceHeader TSH

JOIN (

SELECT StaffId, StaffName, StaffSalary

FROM MsStaff

) AS A ON A.StaffId = TSH.StaffId

JOIN (

SELECT CustomerId, CustomerName

FROM MsCustomer

) AS B ON B.CustomerId = TSH.CustomerId

WHERE StaffSalary > (

SELECT AVG(StaffSalary)

FROM MsStaff

) AND StaffName NOT LIKE '% %'

-- Soal 7 --

SELECT ClothesName,

TotalTransaction,

[ServiceType] = LEFT(ServiceType, CHARINDEX(' ', ServiceType)-1),

ServicePrice

FROM MsClothes MC

JOIN (

SELECT ClothesId,

ServiceType,

ServicePrice,

[TotalTransaction] = CAST(COUNT(ServiceId) AS VARCHAR) + ' transaction'

FROM TrServiceDetail

GROUP BY ClothesId, ServiceType, ServicePrice

) AS A ON A.ClothesId = MC.ClothesId

WHERE ServicePrice < (

SELECT AVG(ServicePrice)

FROM TrServiceDetail

) AND ClothesType = 'Cotton'

-- Soal 8 --

SELECT [StaffFirstName] = LEFT(StaffName, CHARINDEX(' ', StaffName)-1),

VendorName,

VendorPhoneNumber,

[TotalTransaction] = SUM(B.TotalTransaction)

FROM MsStaff MS

JOIN TrPurchaseHeader TPH ON TPH.StaffId = MS.StaffId

JOIN (

SELECT VendorId,

VendorName,

[VendorPhoneNumber] = STUFF(VendorPhoneNumber, 1, 2, '+628')

FROM MsVendor

) AS A ON A.VendorId = TPH.VendorId

JOIN (

SELECT PurchaseId,

[TotalTransaction] = COUNT(PurchaseId)

FROM TrPurchaseDetail

WHERE Quantity > (

SELECT AVG(Quantity)

FROM TrPurchaseDetail

)

GROUP BY PurchaseId

) AS B ON B.PurchaseId = TPH.PurchaseId

WHERE CHARINDEX(' ', StaffName) > 0

GROUP BY StaffName, VendorName, VendorPhoneNumber

-- Soal 9 --

CREATE VIEW ViewMaterialPurchase

AS

SELECT MaterialName,

[MaterialPrice] = FORMAT(MaterialPrice, 'C0', 'in-ID'),

[TotalTransaction] = COUNT(PurchaseId),

[TotalPrice] = SUM(Quantity\*MaterialPrice)

FROM MsMaterial MM

JOIN TrPurchaseDetail TPD ON TPD.MaterialId = MM.MaterialId

WHERE MaterialType = 'Supplies'

GROUP BY MaterialName, MaterialPrice

HAVING COUNT(PurchaseId) > 2

SELECT \* FROM ViewMaterialPurchase

-- Soal 10 --

CREATE VIEW ViewMaleCustomerTransaction

AS

SELECT CustomerName,

ClothesName,

[TotalTransaction] = COUNT(TSD.ServiceId),

[TotalPrice] = SUM(ServicePrice)

FROM MsCustomer MC

JOIN TrServiceHeader TSH ON TSH.CustomerId = MC.CustomerId

JOIN TrServiceDetail TSD ON TSD.ServiceId = TSH.ServiceId

JOIN MsClothes ML ON ML.ClothesId = TSD.ClothesId

WHERE CustomerGender LIKE 'Male' AND ClothesType IN ('Wool','Linen')

GROUP BY CustomerName, ClothesName

SELECT \* FROM ViewMaleCustomerTransaction ORDER BY CustomerName

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