Practicum Case	
COMP6799 | COMP6799001 | COMP6799016 | COMP6799049 Database Technology	BINUS UNIVERSITY Software Laboratory Center
Computer Science	**E231-COMP6799-HG01-03**
Valid on *Even Semester Year 2022/2023*	**Revision 00**

Learning Outcomes

- LO2 – explain the concepts of relational algebra, DDL, DML, transaction management on database and concurrency control

Topic
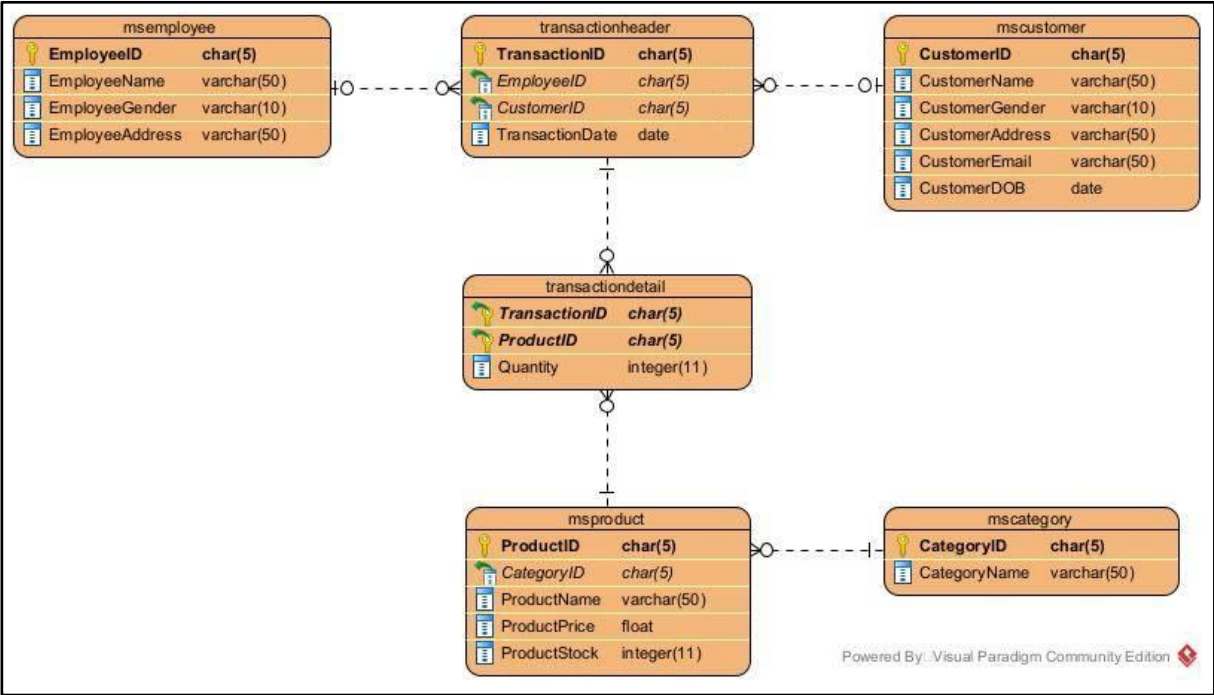
- Session 03 – Data Manipulation Language (DML)

Subtopics

- Alter Table
- Update Query
- Delete Query
- Transaction

Tabel Relasional
Relational Table

Soal
Case

1. **Insert** these data into **TransactionDetail table**:

TransactionID	ProductID	Quantity
TR001	PR014	27
TR001	PR010	2
TR005	PR005	26
TR005	PR002	21

2. **Insert** this data into **MsProduct table**:

    (**RAND**, **ROUND**)

ProductID	CategoryID	ProductName	ProductPrice	ProductStock
PR047	CT004	Wagyu Saikoro	12.99	Random decimal number between 10 and 50 and round the result to 2 decimal places.

3. **Add** this **column** to **MsCustomer table**:

Field Name	Data Type	Length	Description
CustomerPhone	VARCHAR	50	Cannot be empty.

4. **Add** a **constraint** named "**check_phonenumber**" to check the **CustomerPhone** must be **numeric**.

    (**REGEXP**)

5. **Delete** data on **TransactionHeader table** for every **transaction** which **TransactionID is 'TR001'**, **'TR003'**, or **'TR005'**.
    (**IN**)

    Before:

TransactionID	EmployeeID	CustomerID	TransactionDate
TR001	EM006	CU002	2022-05-01
TR002	EM005	CU003	2022-07-02
TR003	EM011	CU001	2022-02-14
TR004	EM014	CU007	2022-10-20
TR005	EM005	CU008	2022-12-25
TR006	EM009	CU009	2022-06-06
TR007	EM011	CU015	2022-01-01
TR008	EM013	CU005	2022-03-02
TR009	EM014	CU013	2022-08-09
TR010	EM009	CU002	2022-09-01

    After:

TransactionID	EmployeeID	CustomerID	TransactionDate
TR002	EM005	CU003	2022-07-02
TR004	EM014	CU007	2022-10-20
TR006	EM009	CU009	2022-06-06
TR007	EM011	CU015	2022-01-01
TR008	EM013	CU005	2022-03-02
TR009	EM014	CU013	2022-08-09
TR010	EM009	CU002	2022-09-01

6. **Update** data on **MsProduct table** by **subtracting ProductPrice by 2** for every **product** which **price is above 10**.

Before:

ProductID	CategoryID	ProductName	ProductPrice	ProductStock
PR031	CT001	2% Milk	2.99	100
PR032	CT002	Roma Tomatoes	1.49	200
PR033	CT004	Mature Spinach	2.49	150
PR034	CT001	Blue Cheese	6.99	50
PR035	CT003	Pink Lady Apples	1.49	300
PR036	CT002	Yellow Cherry Tomatoes	1.49	200
PR037	CT004	Wild-Caught Tuna	12.99	100
PR038	CT001	Goat Cheese	5.99	50
PR039	CT003	Red Delicious Apples	0.99	300
PR040	CT002	Heirloom Tomatoes	2.49	150
PR041	CT004	Wild-Caught Halibut	14.99	100
PR042	CT001	Swiss Cheese	4.99	50
PR043	CT002	Beefsteak Tomatoes	1.49	200
PR044	CT003	Bosc Pears	1.49	300
PR045	CT004	Wild-Caught Sole	11.99	100
PR046	CT001	Goat Milk	3.99	30

After:

ProductID	CategoryID	ProductName	ProductPrice	ProductStock
PR031	CT001	2% Milk	2.99	100
PR032	CT002	Roma Tomatoes	1.49	200
PR033	CT004	Mature Spinach	2.49	150
PR034	CT001	Blue Cheese	6.99	50
PR035	CT003	Pink Lady Apples	1.49	300
PR036	CT002	Yellow Cherry Tomatoes	1.49	200
PR037	CT004	Wild-Caught Tuna	10.99	100
PR038	CT001	Goat Cheese	5.99	50
PR039	CT003	Red Delicious Apples	0.99	300
PR040	CT002	Heirloom Tomatoes	2.49	150
PR041	CT004	Wild-Caught Halibut	12.99	100
PR042	CT001	Swiss Cheese	4.99	50
PR043	CT002	Beefsteak Tomatoes	1.49	200
PR044	CT003	Bosc Pears	1.49	300
PR045	CT004	Wild-Caught Sole	9.99	100
PR046	CT001	Goat Milk	3.99	30

7. **Update** data on **MsCustomer table** by **adding** 'Mrs.' to customer name and **adding** 'lady' to customer email before the '@' character for every **female** customer which **age** is **over 20**. (**CONCAT, INSERT, LOCATE, TIMESTAMPDIFF, CURDATE**)

Before:

CustomerID	CustomerName	CustomerGender	CustomerAddress	CustomerEmail	CustomerDOB
CU001	Dirk Titterell	Male	74 Melvin Point	dtitterell0@yellowpages.com	2003-10-29
CU002	Dukey Diano	Male	92 Sugar Alley	ddiano1@state.com	2003-09-27
CU003	Alex Meekins	Male	577 Dovetail Park	ameekins2@blogs.com	1996-11-06
CU004	Cherice Jermey	Female	811 Debs Street	cjermey3@guardian.com	2000-05-18
CU005	Ingamar Carlin	Male	389 Surrey Pass	icarlin4@shareasale.com	2003-08-08
CU006	Pooh McCutcheon	Male	7 Melby Trail	pmccutcheon5@salon.com	2001-08-03
CU007	Silvain Jozsa	Female	19269 Maryland Hill	sjozsa6@omniture.com	2003-12-30
CU008	Javier Drewson	Female	8 Moulton Point	jdrewson7@home.com	1996-08-20
CU009	Wilbur Francino	Female	21840 Golden Leaf Avenue	wfrancino8@wunderground.com	2003-10-06
CU010	Sadie Snow	Female	70 Eagle Crest Hill	ssnow9@github.com	2004-04-25
CU011	Sofie Carmen	Female	20196 Springview Plaza	scarmena@gov.com	2000-11-20
CU012	Amy Grenkov	Male	2263 Weeping Birch Center	agrenkovb@aol.com	2003-06-06

After:

CustomerID	CustomerName	CustomerGender	CustomerAddress	CustomerEmail	CustomerDOB
CU001	Dirk Titterell	Male	74 Melvin Point	dtitterell0@yellowpages.com	2003-10-29
CU002	Dukey Diano	Male	92 Sugar Alley	ddiano1@state.com	2003-09-27
CU003	Alex Meekins	Male	577 Dovetail Park	ameekins2@blogs.com	1996-11-06
CU004	Mrs.Cherice Jermey	Female	811 Debs Street	cjermey3lady@guardian.com	2000-05-18
CU005	Ingamar Carlin	Male	389 Surrey Pass	icarlin4@shareasale.com	2003-08-08
CU006	Pooh McCutcheon	Male	7 Melby Trail	pmccutcheon5@salon.com	2001-08-03
CU007	Silvain Jozsa	Female	19269 Maryland Hill	sjozsa6@omniture.com	2003-12-30
CU008	Mrs.Javier Drewson	Female	8 Moulton Point	jdrewson7lady@home.com	1996-08-20
CU009	Wilbur Francino	Female	21840 Golden Leaf Avenue	wfrancino8@wunderground.com	2003-10-06
CU010	Sadie Snow	Female	70 Eagle Crest Hill	ssnow9@github.com	2004-04-25
CU011	Mrs.Sofie Carmen	Female	20196 Springview Plaza	scarmenalady@gov.com	2000-11-20
CU012	Amy Grenkov	Male	2263 Weeping Birch Center	agrenkovb@aol.com	2003-06-06

8. Display **ProductID**, **ProductName**, **ProductPrice** (obtained by **adding '$'** in front of the **ProductPrice**), and **CategoryName** for every **product** which **category is "Dairy" or "Meat"**. (**CONCAT**, **JOIN**)

ProductID	ProductName	ProductPrice	CategoryName
PR004	Mozarella Cheese	$5.99	Dairy
PR009	Cheddar Cheese	$4.99	Dairy
PR012	Gouda Cheese	$5.99	Dairy
PR015	Unsalted Butter	$3.49	Dairy
PR020	Feta Cheese	$3.99	Dairy
PR025	Whole Milk	$2.99	Dairy
PR028	Salted Butter	$3.49	Dairy
PR031	2% Milk	$2.99	Dairy
PR034	Blue Cheese	$6.99	Dairy
PR038	Goat Cheese	$5.99	Dairy
PR042	Swiss Cheese	$4.99	Dairy
PR046	Goat Milk	$3.99	Dairy
PR003	Sockeye Salmon	$9.99	Meat
PR007	Free-Range Chicken Breast	$8.99	Meat
PR011	Atlantic Salmon	$9.99	Meat
PR018	Coho Salmon	$9.99	Meat
PR022	Wild-Caught Salmon	$9.99	Meat
PR033	Mature Spinach	$2.49	Meat
PR037	Wild-Caught Tuna	$12.99	Meat
PR041	Wild-Caught Halibut	$14.99	Meat
PR045	Wild-Caught Sole	$11.99	Meat

9. Display **EmployeeName** and **EmployeeAddress** for every **employee** who ever handled a transaction with a **female customer** in **December.** (**DISTINCT**, **MONTH**)

EmployeeName	EmployeeAddress
Shanda	848 New Castle Center
Darsie	31718 Toban Point
Curr	2 Veith Terrace