Assignment Case	
DatabaseH4	
Periode Berlaku Semester Genap 2023/2024 ***Valid on*** *Even Year 2023/2024*	**Software Laboratory Center** **Assistant Recruitment 24-2**

Note: Please focus on the main logic and main feature!
(Splash screen and design are not scored)

Soal
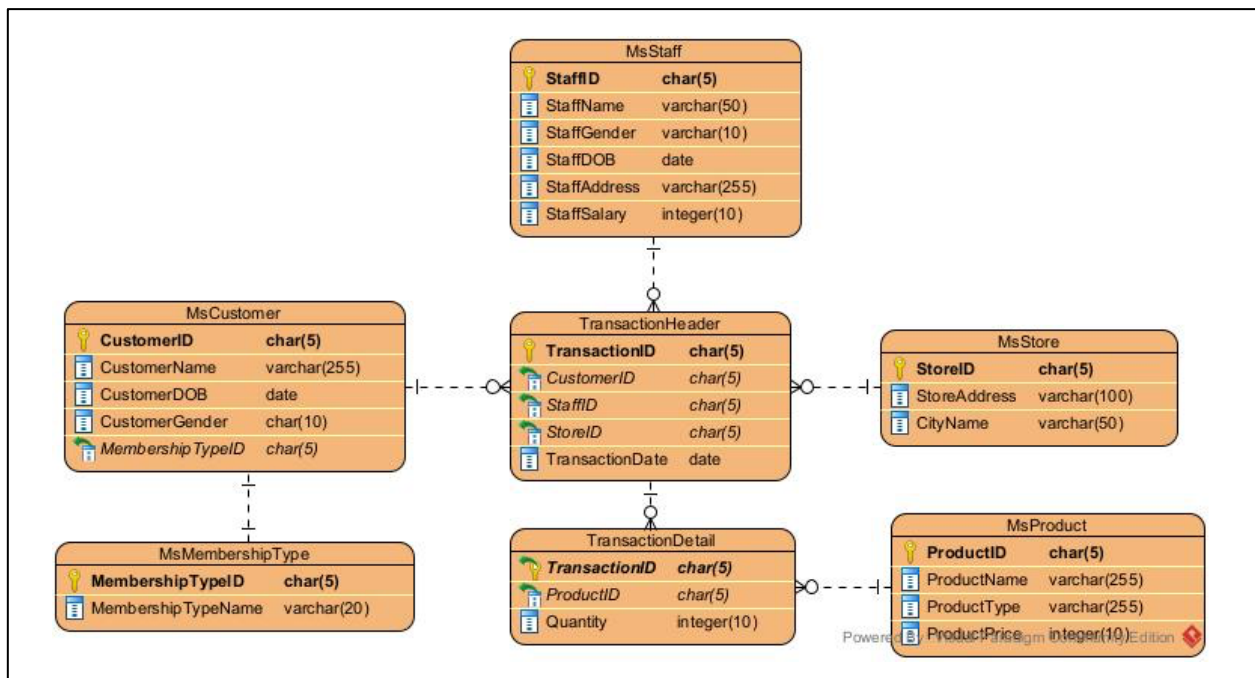*Case*

TheHarvelSt

Figure 1. Database ERD

TheHarvelSt is a bustling bakery known for its artisanal bread and decadent pastries, all made with locally sourced ingredients. With a cozy atmosphere and irresistible aromas, it's a beloved destination for those seeking delicious homemade treats in the heart of town. You, as a database administrator are asked to manage their database and perform some query based on the task below.

1. Display the **Customer ID** (obtained from **CustomerID**) and **Customer Name** (obtained from **CustomerName**) of customers who bought **more than two** items in a transaction.
   (EXCEPT, GROUP BY, HAVING)

	Customer ID	Customer Name
1	CU001	John Doe
2	CU002	Jane Smith
3	CU003	Michael Johnson
4	CU004	Emily Davis
5	CU005	David Wilson
6	CU009	Christopher Hall
7	CU013	Sophia Lopez
8	CU015	Mia Gonzalez
9	CU016	Alexander Hernandez
10	CU020	James Campbell

2. Display the **Product ID** (obtained from **ProductID**) and **Product Name** (obtained from **ProductName**) of each product with a price greater than the average price.
   (AVG)

	Product ID	Product Name
1	PR005	Black Forest Cake
2	PR006	Red Velvet Cake
3	PR007	Carrot Cake

3. Display **Customer ID** (obtained from **CustomerID**) with format 'Customer XXX', **Customer Name** (obtained from **CustomerName**) add **'Mr. '** if **CustomerGender** is **'Male'** and **'Mrs. '** if **CustomerGender** is **'Female'**, **Membership Type** (obtained from **MembershipType**), **Date of Birth** (obtained from **CustomerDOB** with the format **DD-Mon-YYYY** ex: "15 Dec 2005") and **Age** (obtained from the **calculated age based on CustomerDOB**).
   (REPLACE, CONCAT, UNION, CONVERT, DATEDIFF)

	Customer ID	Customer Name	Membership Type	Date of Birth	Age
1	Customer 005	Mr. David Wilson	Silver	08 Sep 1995	29
2	Customer 006	Mrs. Sarah Brown	Gold	25 Jul 1998	26
3	Customer 007	Mr. Robert Lee	Basic	17 Feb 2001	23
4	Customer 008	Mrs. Lisa Taylor	Silver	04 May 1999	25
5	Customer 012	Mr. Daniel Rodriguez	Silver	09 Aug 1997	27
6	Customer 013	Mrs. Sophia Lopez	Basic	24 Feb 2000	24
7	Customer 015	Mrs. Mia Gonzalez	Gold	27 Jun 1996	28
8	Customer 016	Mr. Alexander Hernandez	Basic	14 Sep 1998	26
9	Customer 017	Mrs. Isabella Flores	Silver	22 Dec 1999	25
10	Customer 018	Mr. William Ramirez	Gold	31 Jul 2002	22

4. Display the **Best Seller Product** (obtained from the **most sold** product in **2023**) and **Total Product Sold** (obtained from the **quantity** of product sold).
   (SUM, YEAR, TOP, ORDER BY)

	Best Seller Product	Total Product Sold
1	Sourdough Bread	28

5. Display **First Name** (obtained from the **first name** of every **staff**), **Last Name** (obtained from the **last name** of every **staff**) and **Total Transaction** (obtained from **transaction amount** done by **every staff**).
   (LEFT, RIGHT, CHARINDEX, REVERSE, COUNT)

	First Name	Last Name	Total Transaction
1	Alexander	Hernandez	4
2	Amanda	Clark	3
3	Christopher	Hall	6
4	David	Wilson	3
5	Emily	Johnson	1
6	Ethan	Perez	2
7	Jessica	Davis	2
8	John	Smith	2
9	Lisa	Taylor	3
10	Mia	Gonzalez	4
11	Michael	Brown	3
12	Oliver	Harris	5
13	Robert	Lee	5
14	Sarah	Martinez	1
15	Sophia	Lopez	6

6. Display **Customer Name** (obtained from **CustomerName**) and **Total Coffee Purchased** (obtained from the **transaction amount** done where the **product type** is **coffee**) for male customers (obtained from **CustomerGender**).
   (COUNT)

	CustomerName	Total Coffee Purchased
1	Daniel Rodriguez	4
2	Ethan Perez	1
3	John Doe	2
4	Michael Johnson	1
5	Robert Lee	1
6	William Ramirez	5

7. Display **Membership Type** (obtained from **MembershipTypeName** in **uppercased** format) and **Customers** (obtained from the **customer amount** per **membership type**).

   (UPPER, COUNT)

	Membership Type	Customers
1	BASIC	7
2	GOLD	6
3	SILVER	7

8. Display **Customer Name** (obtained from **CustomerName** in **lowercased** format) and **Total Spending** (obtained from **total spending per customer starts** with '**Rp. '** and **ends** with '**,-**'), sort the result based on **Total Spending** in **descending** order.

   (LOWER, CONCAT, SUM, ORDER BY)

	Customer Name	Total Spending
1	ethan perez	Rp. 319000,-
2	daniel rodriguez	Rp. 212000,-
3	william ramirez	Rp. 207000,-
4	sarah brown	Rp. 204000,-
5	olivia martinez	Rp. 196000,-
6	lisa taylor	Rp. 195000,-
7	robert lee	Rp. 187000,-
8	sofia adams	Rp. 167000,-
9	isabella flores	Rp. 133000,-
10	amanda clark	Rp. 125000,-
11	sophia lopez	Rp. 93000,-
12	alexander hernandez	Rp. 80000,-
13	john doe	Rp. 53000,-
14	mia gonzalez	Rp. 45000,-
15	michael johnson	Rp. 32000,-
16	christopher hall	Rp. 30000,-
17	david wilson	Rp. 30000,-
18	emily davis	Rp. 30000,-

9. Display **First Name** (obtained from the **first name** from every **staff**), **Last Name** (obtained from **last name** from every **staff**), **Total Earning 2023** (obtained from **calculated sold product price** in **2023**), **Total Earning 2024** (obtained from **calculated sold product price** in **2024**).

   (LEFT, REVERSE, SUBSTRING, CHARINDEX, CONCAT, SUM, CASE WHEN, YEAR)

	First Name	Last Name	Total Earning 2023	Total Earning 2024
1	Jessica	Davis	Rp. 30000,-	Rp. 53000,-
2	Ethan	Perez	Rp. 32000,-	Rp. 0,-
3	Mia	Gonzalez	Rp. 167000,-	Rp. 32000,-
4	Alexander	Hernandez	Rp. 60000,-	Rp. 90000,-
5	John	Smith	Rp. 30000,-	Rp. 75000,-
6	David	Wilson	Rp. 32000,-	Rp. 105000,-
7	Sarah	Martinez	Rp. 53000,-	Rp. 0,-
8	Robert	Lee	Rp. 148000,-	Rp. 93000,-
9	Emily	Johnson	Rp. 45000,-	Rp. 0,-
10	Lisa	Taylor	Rp. 156000,-	Rp. 0,-
11	Christopher	Hall	Rp. 55000,-	Rp. 102000,-
12	Amanda	Clark	Rp. 164000,-	Rp. 0,-
13	Michael	Brown	Rp. 80000,-	Rp. 100000,-
14	Oliver	Harris	Rp. 260000,-	Rp. 0,-
15	Sophia	Lopez	Rp. 240000,-	Rp. 136000,-

10. Display **Customer Name** (obtained from **CustomerName**), **Total Transactions** (obtained from **total transactions made**) for customers whose first name contains **'Isabella'**.

(COUNT)

	CustomerName	Total Transactions
1	Isabella Flores	2