|  |  |
| --- | --- |
| **Practicum Case** | Diagram  Description automatically generated |
| COMP6799 | COMP6799001 | COMP6799016 | COMP6799049  Database Technology |
| **Computer Science** | **E231-COMP6799-HG01-01** |
| ***Valid on*** *Even Semester Year 2022/2023* | **Revision 00** |

## Learning Outcomes

* LO1 – define model data and information in the form of concept diagrams and physical diagrams and apply them to the database in a DBMS, both individually and in teamwork
* LO2 – explain the concepts of relational algebra, DDL, DML, transaction management on database and concurrency control

## Topic

* Session 01 – Introduction to MySQL

## Sub Topics

* Create and Drop Database
* Select Database
* Import and Export Database
* Create and Drop Table
* Data Types SQL
* Data Definition Language (DDL) Basic Syntax
* Data Manipulation Language (DML) Basic Syntax
* Data Control Language (DCL) Basic Syntax

## Soal

*Case*

1. **Create** a **database** named “**hehe\_groceries**”.
2. **Create** **tables** with the following description:

(**REGEXP**)

|  |  |  |  |
| --- | --- | --- | --- |
| **MsCustomer** | | | |
| **Field Name** | **Data Type** | **Length** | **Description** |
| CustomerID | CHAR | 5 | **Primary Key.**  CustomerID must starts with ‘**CU**’ and followed by **3 numbers** (e.g. CU001, CU928, CU999, etc.) |
| CustomerName | VARCHAR | 50 | **Cannot be empty.** |
| CustomerGender | VARCHAR | 10 | **Cannot be empty.** |
| CustomerAddress | VARCHAR | 50 | **Cannot be empty.** |
| CustomerEmail | VARCHAR | 50 | **Cannot be empty.** |
| CustomerDOB | DATE | - | **Cannot be empty.** |

|  |  |  |  |
| --- | --- | --- | --- |
| **MsEmployee** | | | |
| **Field Name** | **Data Type** | **Length** | **Description** |
| EmployeeID | CHAR | 5 | **Primary Key.**  EmployeeID must starts with ‘**EM**’ and followed by **3 numbers** (e.g. EM001, EM187, EM999, etc.) |
| EmployeeName | VARCHAR | 50 | **Cannot be empty.** |
| EmployeeGender | VARCHAR | 10 | **Cannot be empty.** |
| EmployeeAddress | VARCHAR | 50 | **Cannot be empty.** |

|  |  |  |  |
| --- | --- | --- | --- |
| **MsCategory** | | | |
| **Field Name** | **Data Type** | **Length** | **Description** |
| CategoryID | CHAR | 5 | **Primary Key.**  CategoryID must starts with ‘**CT**’ and followed by **3 numbers** (e.g. CT001, CT235, CT999, etc.) |
| CategoryName | VARCHAR | 50 | **Cannot be empty.** |

|  |  |  |  |
| --- | --- | --- | --- |
| **MsProduct** | | | |
| **Field Name** | **Data Type** | **Length** | **Description** |
| ProductID | CHAR | 5 | **Primary Key.**  FishID must starts with ‘**PR**’ and followed by **3 numbers** (e.g. PR001, PR193, PR999, etc.) |
| CategoryID | VARCHAR | 5 | Reference to **CategoryID** on **MsCategory**.If the referenced data is changed, then the data in **MsProduct** will also be **changed**. If the referenced data is removed, then the data in **MsProduct** will also be **removed**. |
| ProductName | VARCHAR | 50 | **Cannot be empty.** |
| ProductPrice | INT | **-** | **Cannot be empty.** |

|  |  |  |  |
| --- | --- | --- | --- |
| **TransactionHeader** | | | |
| **Field Name** | **Data Type** | **Length** | **Description** |
| TransactionID | CHAR | 5 | **Primary Key.**  TransactionID must starts with ‘**TR**’ and followed by **3 numbers** (e.g. TR001, TR693, TR999, etc) |
| EmployeeID | CHAR | 5 | Reference to **EmployeeID** on **MsEmployee**.If the referenced data is changed, then the data in **TransactionHeader** will also be **changed**. If the referenced data is removed, then the data in **TransactionHeader** will also be **removed**. |
| CustomerID | CHAR | 5 | Reference to **CustomerID** on **MsCustomer**.If the referenced data is changed, then the data in **TransactionHeader** will also be **changed**. If the referenced data is removed, then the data in **TransactionHeader** will also be **removed**. |
| TransactionDate | DATE | - | **Cannot be empty.** |

|  |  |  |  |
| --- | --- | --- | --- |
| **TransactionDetail** | | | |
| **Field Name** | **Data Type** | **Length** | **Description** |
| TransactionID | CHAR | 5 | **Primary Key.**  Reference to **TransactionId** on **TransactionHeader**.If the referenced data is changed, then the data in **TransactionDetail** will also be **changed**. If the referenced data is removed, then the data in **TransactionDetail** will also be **deleted**. |
| ProductID | CHAR | 5 | **Primary Key.**  Reference to **ProductID** on **MsProduct**.If the referenced data is changed, then the data in **TransactionDetail** will also be **changed**. If the referenced data is removed, then the data in **TransactionDetail** will also be **deleted**. |
| Quantity | INT | **-** | **Cannot be empty.**  Must be **more than 0**. |

|  |  |  |  |
| --- | --- | --- | --- |
| **MsBrand** | | | |
| **Field Name** | **Data Type** | **Length** | **Description** |
| BrandID | CHAR | 5 | **Primary Key.**  BrandID must starts with ‘**BR**’ and followed by **3 numbers** (e.g. BR001, BR693, BR999, etc). |
| BrandName | VARCHAR | 50 | **Cannot be empty.** |

1. **Delete** the **MsBrand** **table**.
2. **Insert** these data into **MsCustomer** **table**:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Customer**  **ID** | **Customer**  **Name** | **Customer**  **Gender** | **Customer**  **Address** | **Customer**  **Email** | **Customer**  **DOB** |
| CU001 | Dirk Titterel | Male | 74 Melvin Point | Dtitterel0@yellowpages.com | 2003-10-29 |

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

|  |  |  |  |
| --- | --- | --- | --- |
| **EmployeeID** | **EmployeeName** | **EmployeeGender** | **EmployeeAddress** |
| EM001 | Clem | Male | 0975 Forest Dale Trail |
| EM002 | Dene | Male | 2 Grayhawk Parkway |
| EM003 | Lethia | Female | 905 Goodland Lane |
| EM004 | Tyrone | Male | 51745 Bowman Hill |
| EM005 | Shanda | Male | 848 New Castle Center |

1. Display **all data** from “**MsEmployee**”.

Table

Description automatically generated

1. Display **all data** for a **customer** whose **name is** “**Dirk Titterell**”

(**LIKE**)

