

Modellierung

Name: _____

Practice

Class: _____

Messenger

Date: _____

The given data model describes a messenger service in which customers can exchange messages containing text and, optionally, an image.

At the center of the model is the entity **CUSTOMER**. For each customer, a unique **CUSTOMER_ID**, the **first name**, the **last name**, and the **date of birth** are stored.

Each customer can have one or more **addresses**. These are managed in the entity **ADDRESS**. For each address, the **street**, the **customer**, the **address type** (for example, home address or business address), and the **house number** are stored. Each address always belongs to exactly one customer.

The streets themselves are stored in the entity **STREET**. For each street, a unique **STREET_ID**, the **street name**, and the associated **city** are stored. Therefore, each street is located in exactly one city.

The cities are managed in the entity **CITY**. For each city, a unique **CITY_ID** and the **city name** are stored. One city can contain several streets, but each street belongs to only one city.

The actual communication content is stored in the entity **MESSAGE**. Each message has a unique **MESSAGE_ID**, a **text**, and optionally a reference to an **image**.

The sending of messages is modeled by the entity **SEND**. This entity links:

- the **sender** of a message,
- the **recipient** of a message,
- the **message that was sent**,
- and the **date and time** the message was sent.

In this context, **CUSTOMER_ID_FROM** and **CUSTOMER_ID_TO** both refer to customers in the entity **CUSTOMER**, while **MESSAGE_ID** refers to the entity **MESSAGE**.

This makes it possible to represent **which customer sent which message to which other customer and at what time**.

The data model therefore supports:

- the management of users of a messenger service,
- the storage of their addresses,
- the geographical assignment through street and city,
- the storage of message content,
- and the documentation of message exchange between two customers.