1. Analyze the “Bank” database model (see below). Perform the following tasks:
    a. Create a list of questions to the Customer (the answers have provide you with a lot of significant details to improve the database).
    b. Create a semantic schema for the database.
    c. Fix all imperfections you see in the database.
    d. Rework the database for MySQL DBMS (using MySQL Workbench or any other tool you prefer).
    e. Using “CTECH DB 04 - Database Modelling - task.eap” and Sparx Enterprise Architect (you may use trial version) add all necessary indexes, views, stored procedures, etc. to the database.

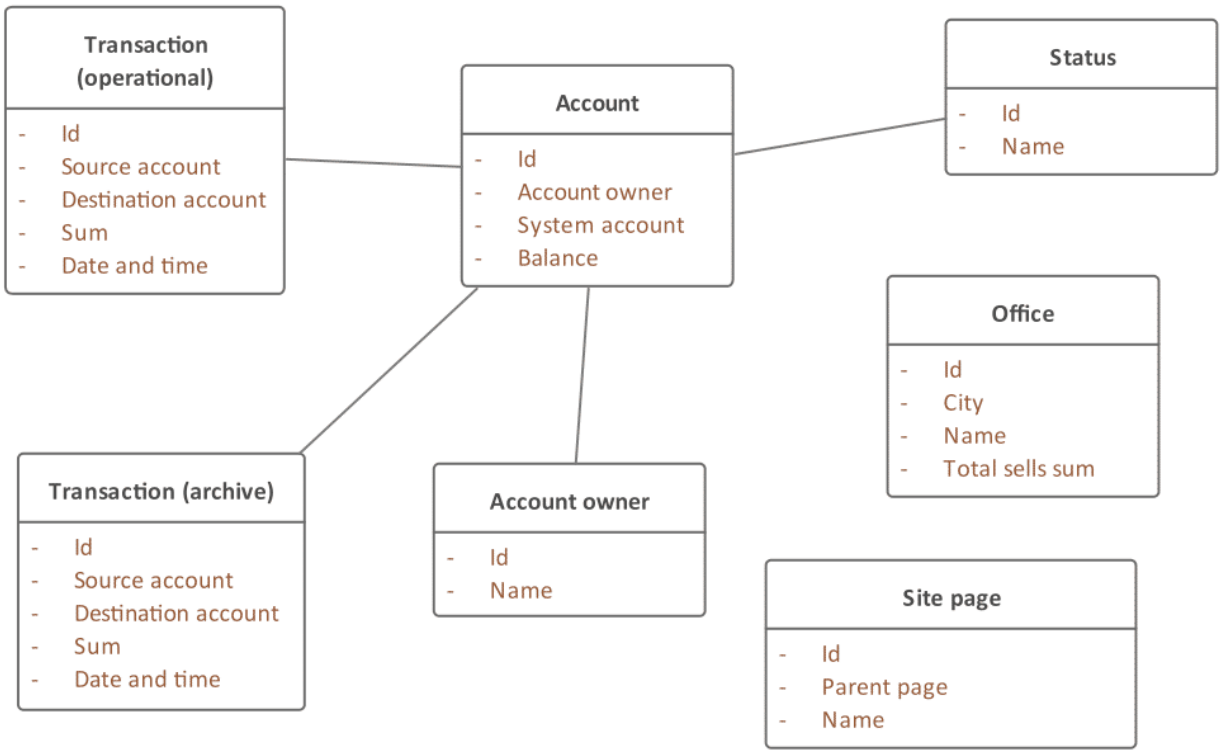
2. Choose a subject matter and create your own database. The result of your work should include:
    a. Conceptual (infological) model in text and UML form.
    b. Logical (datalogical) model created with Sparx Enterprise Architect (you may use trial version).
    c. Physical model created with Sparx Enterprise Architect (you may use trial version).
    d. SQL code (the result of model export from Sparx Enterprise Architect).

This is an extremely simplified database model for some imaginary bank. It contains only basic elements. There are some intentionally made mistakes, so it is your task to find and correct them.

The database represents the following entities and attributes (see Picture A or “Conceptual Model” in “CTECH DB 04 - Database Modelling - task.eap”):

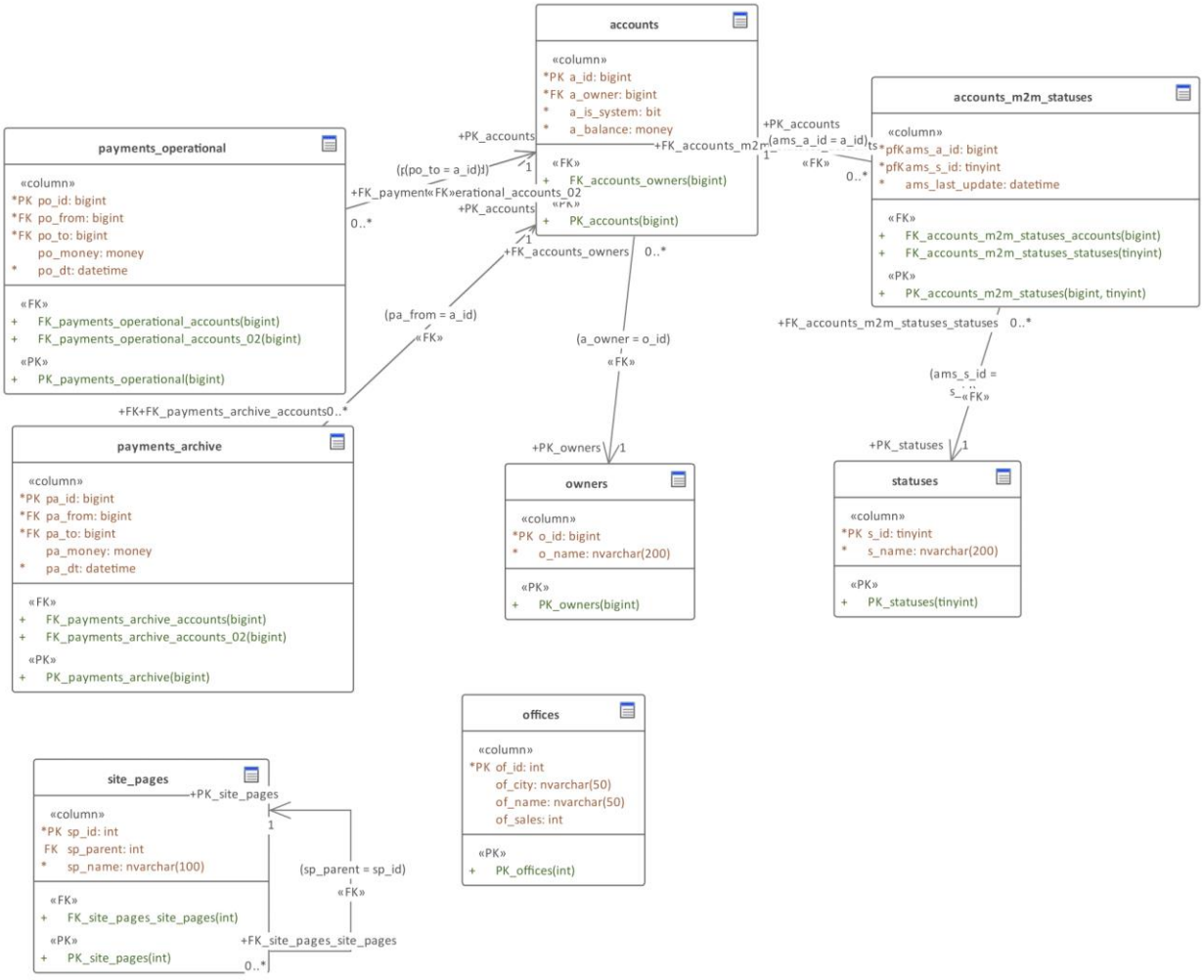
- Account (describes an account):
    - id (account id);
    - balance (account balance, MONEY data type);
    - account owner (FK);
    - system account (a flag representing that this account does not belong to a human).
- Status (account status, e.g., «Active», «Locked» и т.д.):
    - id (status id);
    - name (status name).
- Transaction operational (for transactions in the current month):
    - id (transaction id);
    - source account (FK);
    - destination account (FK);
    - date and time (transaction datetime);
    - sum (transaction total sum).
- Transaction archive (for transactions before the current month):
    - id (transaction id);
    - source account (FK);
    - destination account (FK);
    - date and time (transaction datetime);
    - sum (transaction total sum).
- Account owner (bank client):
    - id (account owner id);
    - name (account owner name).
- Site page (bank website page):
    - id (page id);
    - parent page (rFK);
    - name (page name).
- Office (bank office):
    - id (office id);

- city (office location);
- name (office name);
- total sells sum (MONEY datatype, sum of profit by the office).

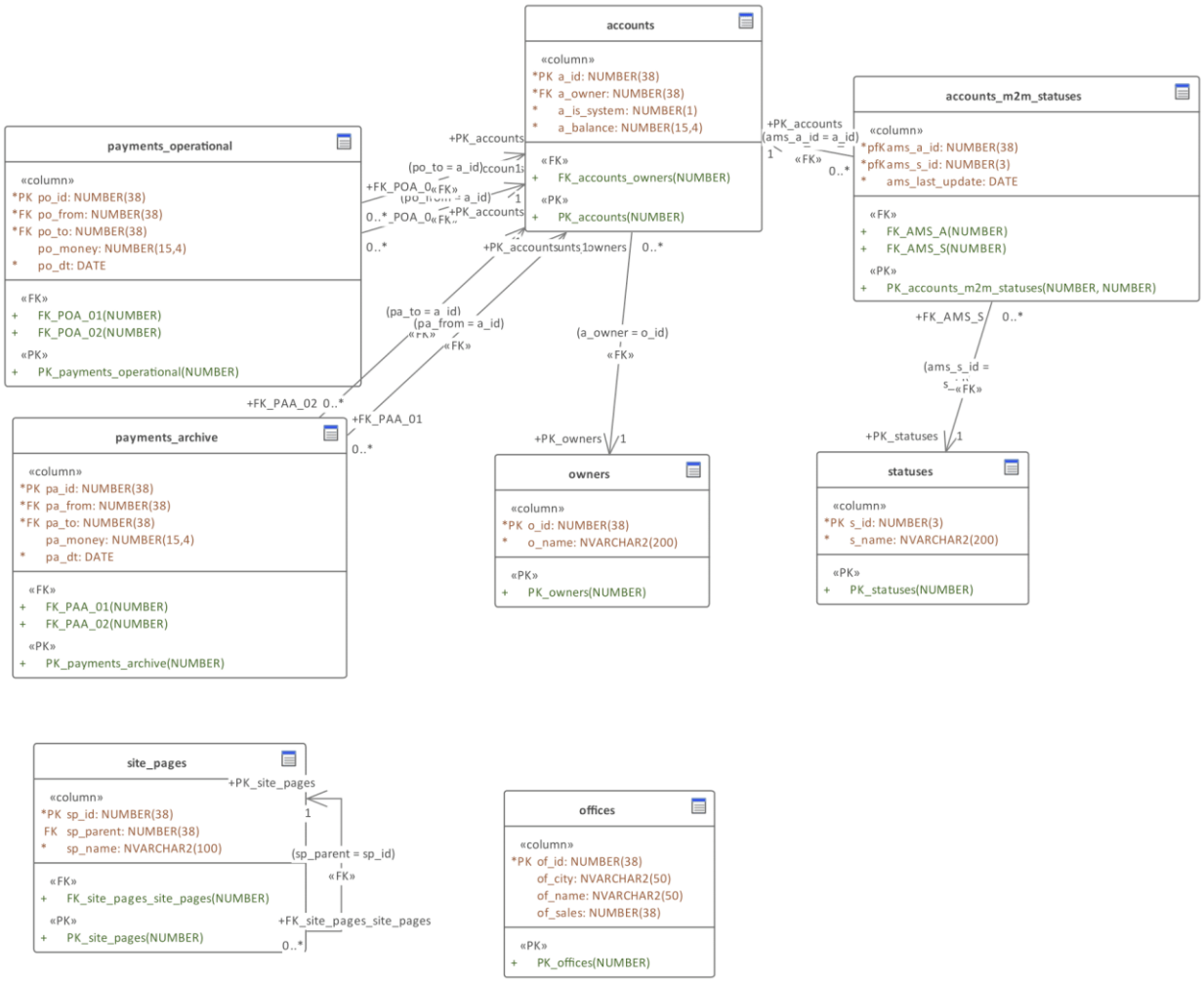


Picture A – “Conceptual Model”

The datalogical level of the database looks like this (see Picture B and Picture C or “Datalogical Model” in “CTECH DB 04 - Database Modelling - task.eap”):



Picture B – “Datalogical Model” for MS SQL Server



Picture C – “Datalogical Model” for Oracle