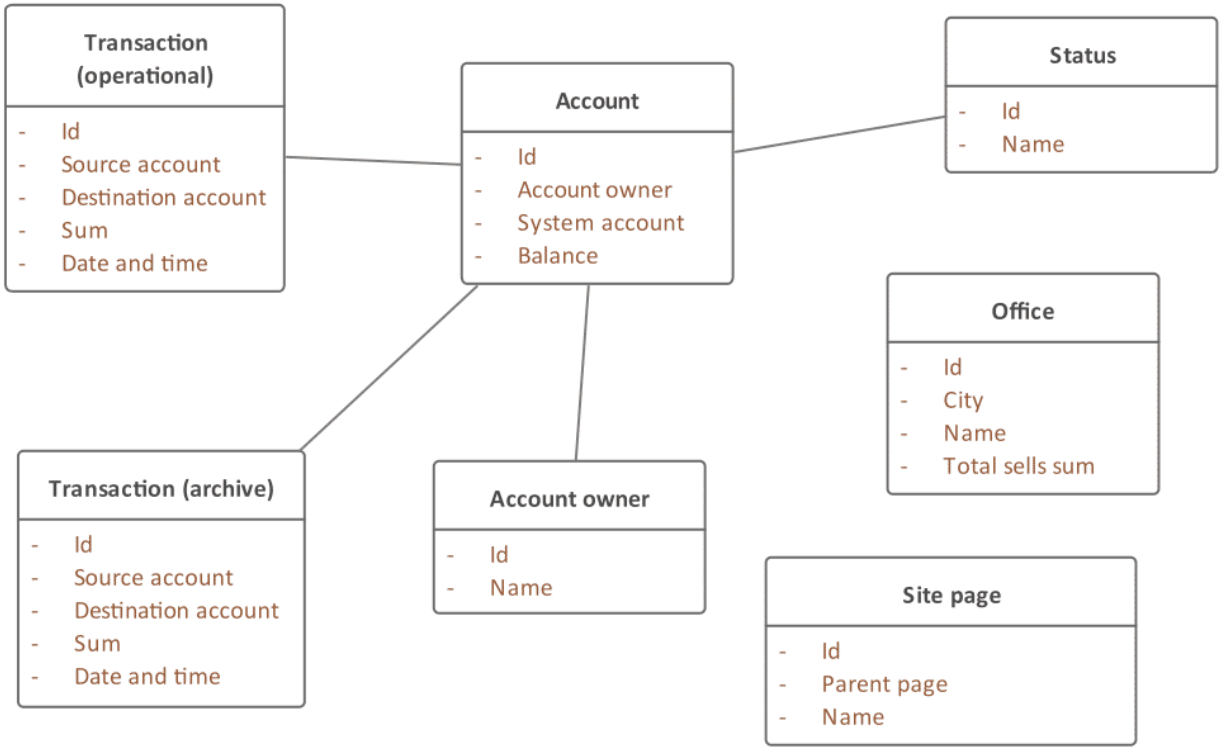
Analyze the “Bank” database model (see below). Perform the following tasks:

1. Do you see any imperfections in its infological and datalogical levels? If yes, name them.
2. What questions do you want to ask the Customer to improve the models? Write down these questions.
3. Try representing the “Bank” database model using graph and hierarchy schemas.

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.

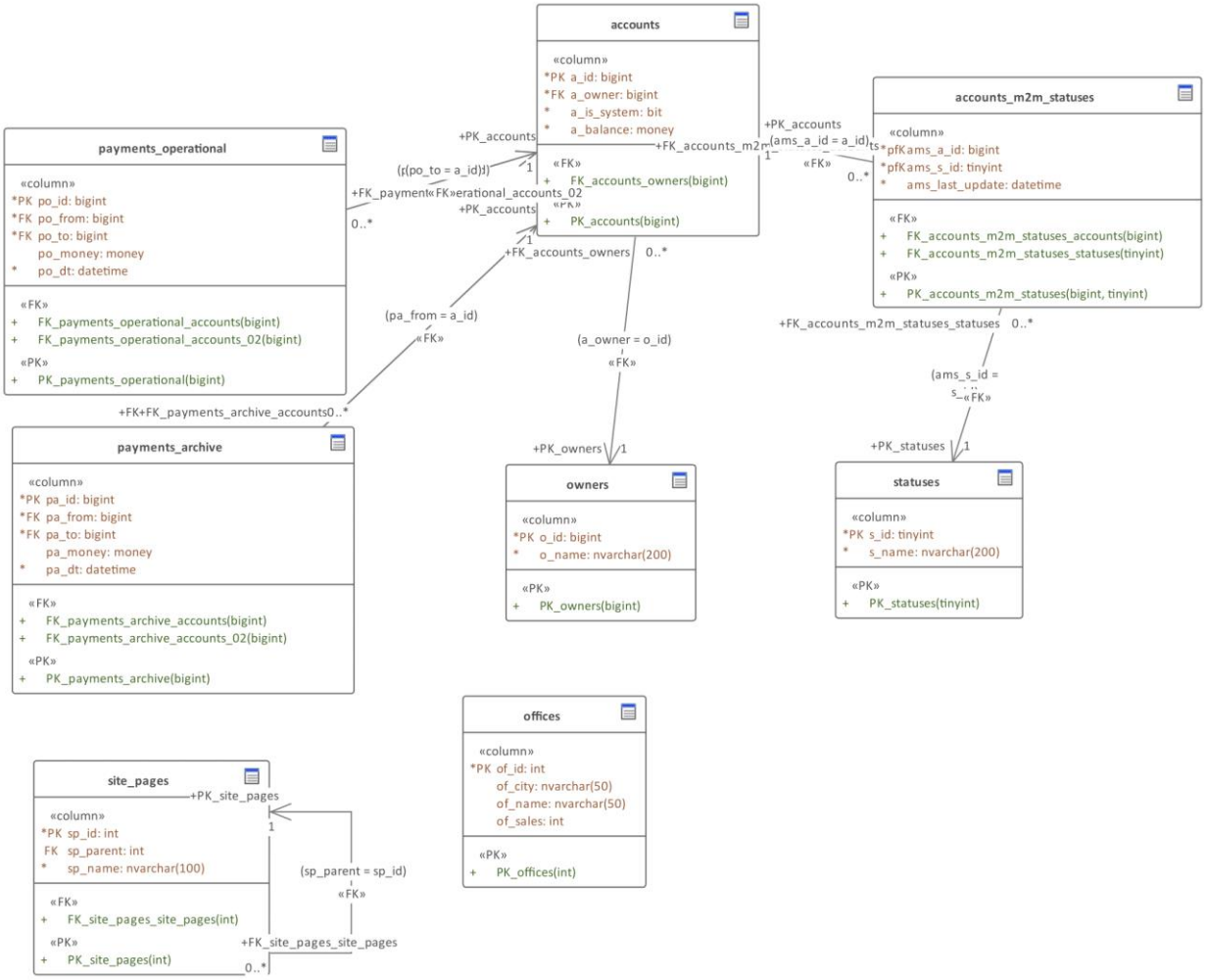
The database represents the following entities and attributes (see Picture A or “Conceptual Model” in “CTECH DB 01 - Databases Fundamentals - task.eap”):

- 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», etc.):
  - 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).

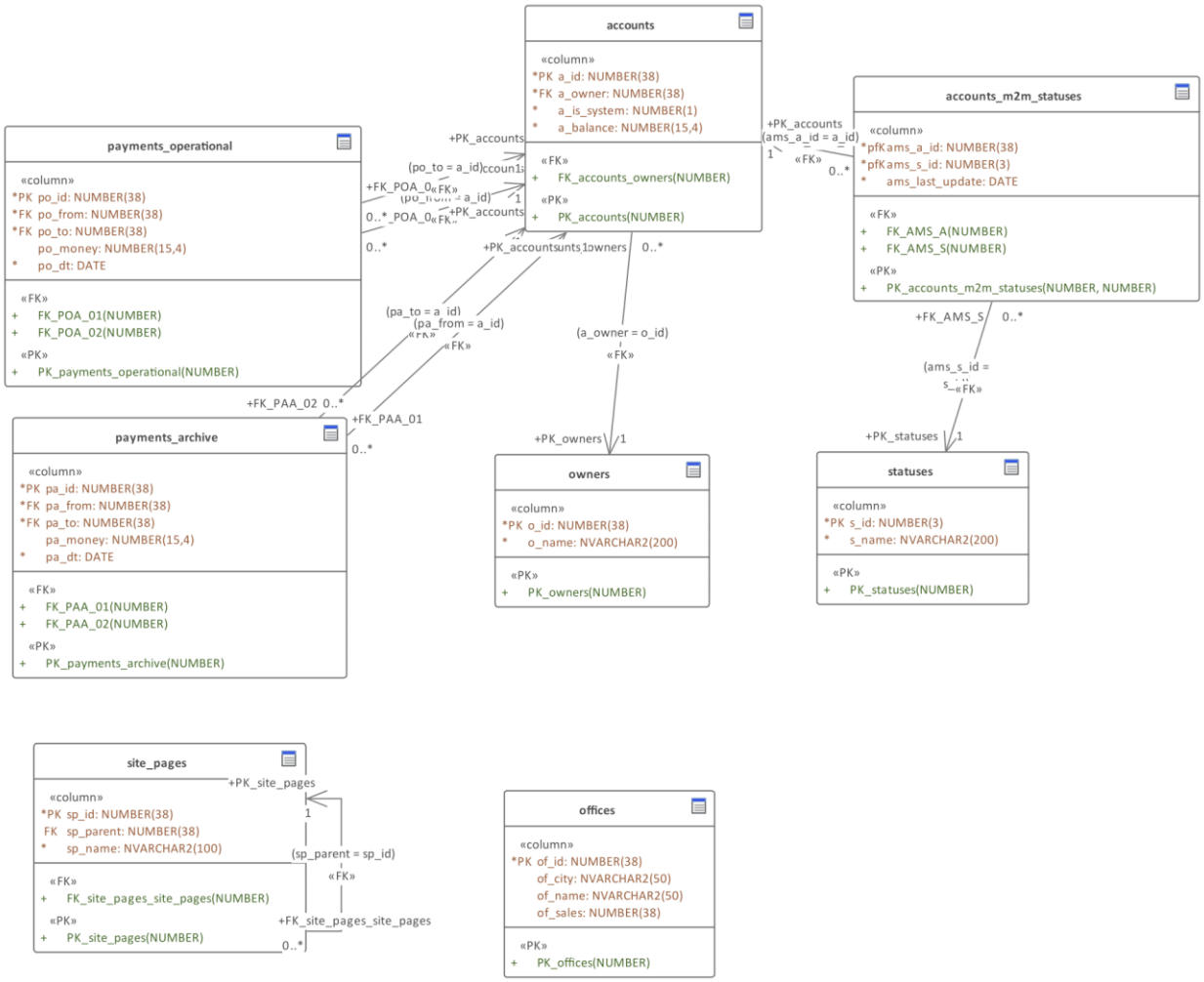


Picture A – “Conceptual Model”

The datalogical level of the database looks like this (see Picture B and Picture C or “Datalogical Model” in “CTECH DB 01 - Databases Fundamentals - task.eap”):



Picture B – “Datalogical Model” for MS SQL Server



Picture C – “Datalogical Model” for Oracle