Practice Class 6

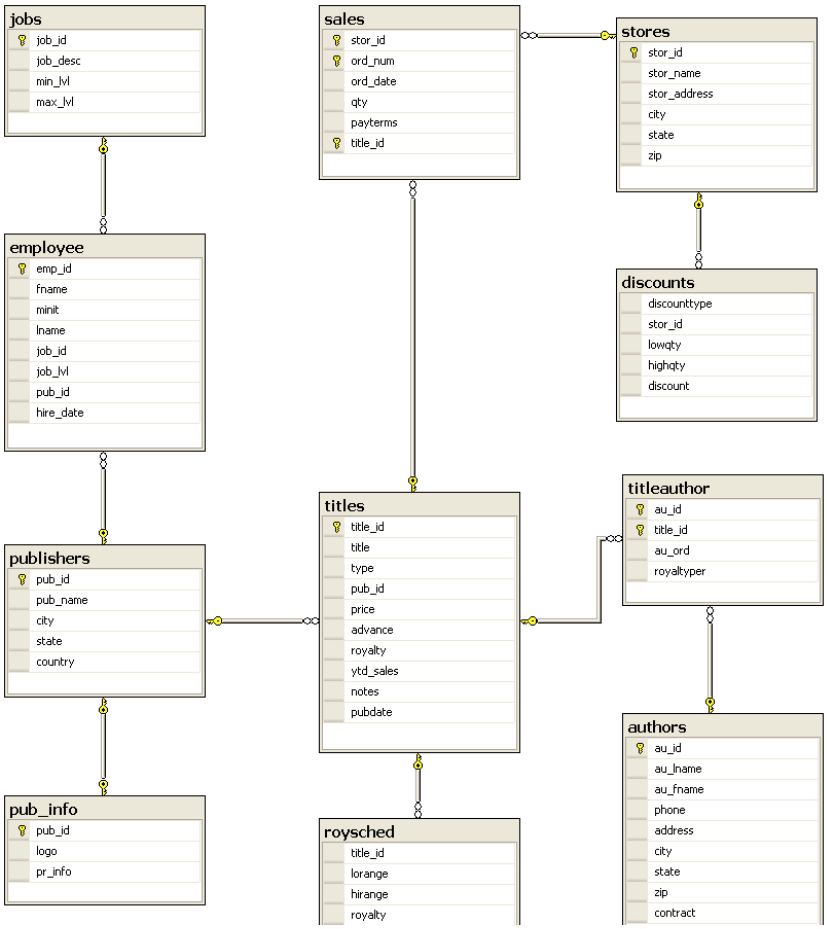
Objectives

SQL DML (Data Manipulation Language).
Enter, Modify, and Delete Data.
Queries construction.

Note: You must follow the response template provided.

Assignment 6.1

In this exercise, we will use the ***pubs database,*** created by Microsoft for demonstrative purposes. This database is available on the class server for scripting. In the alternative, we provide a script for local installation on the site of subject[2]. In this case, you must download and run the *instpubs.sql* in Management Studio. You should look in some detail at the initial part of the file because it contains SQL DDL commands that allow some customizations, such as defining the name of the database to be created. The figure below shows a diagram of the database, generated by Management Studio:



2 Original available in: https://github.com/Microsoft/sql-server-samples/tree/master/samples/databases/northwind-pubs

[3] Based on the relational schema provided for DB *pubs*, build the following queries:

a) All tuples of the authors table (authors);

b) The first name, last name and phone number of the authors;

c) Query set to b) but ordered by first name (ascending) and then last name (ascendant);

d) Query defined in c) but renaming the attributes to (first_name, last_name, telephone);

e) Query defined in d) but only authors from California (CA) whose last name is different from 'Ringer';

f) All publishers that have 'Bo' anywhere in the name;

g) Name of publishers that have at least one publication of type 'Business';

h) Total number of sales of each publisher;

i) Total number of sales of each publisher grouped by title;

j) Name of the titles sold by the store 'Bookbeat';

k) Name of authors who have publications of different types;

l) For titles, get the average price and the total number of sales grouped by type and publisher (pub_id);

m) Obtain the title type(s) for which(s) the maximum money in advance is one and a half times higher than the group average (type);

n) Obtain, for each title, the name of the authors and the amount collected by them with their sale;

o) obtain a list that included the number of sales of a title (ytd_sales), its name, the total of invoices (facturacao), the value of the author's section and the value of the publisher's invoices;

	title	ytd_sales	facturacao	auths_revenue	publisher_revenue
1	But Is It User Friendly?	8780	201501,00	32240,16	169260,84
2	Computer Phobic AND Non-Phobic Individuals: Beha...	375	8096,25	809,625	7286,625
3	Cooking with Computers: Surreptitious Balance Sheets	3876	46318,20	4631,82	41686,38

p) Obtain a list that included the number of sales of a title (ytd_sales), its name, the name of each author, the value of each author's contribution and the value of the publisher;

	title	ytd_sales	author	auth_revenue	publisher_revenue
1	But Is It User Friendly?	8780	Cheryl Carson	32240,16	169260,84
2	Computer Phobic AND Non-Phobic Individuals: Beha...	375	Livia Karsen	607,2187	7286,625
3	Computer Phobic AND Non-Phobic Individuals: Beha...	375	Steams MacFeather	202,4062	7286,625
4	Cooking with Computers: Surreptitious Balance Sheets	3876	Michael O'Leary	1852,728	41686,38
5	Cooking with Computers: Surreptitious Balance Sheets	3876	Steams MacFeather	2779,092	41686,38

q) List of stores that have sold at least one copy of all books;

r) List of stores that sold more books than the average of all stores.

s) Name of titles that were never sold in the "Bookbeat" store;

t) For each publisher, the list of all stores that have never sold titles of that publisher;

3 The responsibility of the authors (Microsoft).

Assignment 6.2

Based on the work developed in exercises 5.1, 5.2 and 5.3 of Relational Algebra (RA):

a) Create the databases in SQL Server using the SQL DDL language. Note the integrity constraints at the domain, entity, and referential level;

b) Enter data in the created databases. It is suggested that you use the *dataset* provided in the last class (available in Moodle);

c) Convert RA *queries* into SQL *queries*.

The performance of this exercise, namely the problem involving the company's database (5.1), is essential for the execution of subsequent scripts.