

## Assignment 2

### Submission

***Your submission will consist of several files zipped together in a complete package. All files must contain your names, student id's in an appropriate header.***

Only one submission per group please.

### Group Work

This assignment is to be completed in groups of 3 or 4. Please only one submission per group.

It is suggested that you **ALL do it individually** and then meet to compare answers. Those not doing the work may be barred from your group resulting in a zero and incomplete on the assignment.

#### **VERY IMPORTANT:**

Being part of a group is the same as being a part of a team for these assignments. When you submitted your work as part of a group you are saying that:

- you understood what was submitted and that you fully participated with ALL the group members.
- It does not mean letting others do your work for you.
- It does not mean watching the others do the work.
- For your full participation, you get a mark equal to all the others in the group.
- If on the test, which is very much like the assignment, you cannot answer it strongly indicates that you didn't participate and understand the assignment but depended on others for the mark you received. That is very much like submitting their work and claiming it is your work.

## Business Use Case Scenario

This case involves a Database creation for a small real estate agency owned by John Wick. In fact, his agency is so small that he is the only agent in the company along with a part-time data entry assistant. John wants to have a database that will keep track of key information for his agency. John has asked you to develop the database that will support a Website that is under development by another contractor.

Firstly, he would like to store information about listed properties like: the address (street, city, province and postal code), # of bedrooms, # of bathrooms, square area (ft<sup>2</sup>) and listing (selling) price. Some properties are single-family homes and John wants to store the lot (land) size; other properties are condos and he needs to display the monthly maintenance fee.

Information about the area in which each property is located is also important. John wants to track the name of the area, along with the names of the schools. Those include the high schools, elementary schools and middle schools. He wants to also store general comments about the area in paragraph form.

John uses a variety of advertising outlets such as newspapers, magazines and Web sites to advertise properties he is selling. He wants to track which advertising outlet is being used to promote each property and that advertising may repeat several times (in the same outlet). John also wants to know when each ad was placed and how much does it cost. And of course, he will store the name and main phone number of the advertising outlet.

He wants to store information about each client as well like: first and last name, main contact number and type along with an e-mail address. Client's must be categorized such that he will know who is selling a house and who is looking to purchase a house. It is possible that each property may be shared by two or more people, and therefore John needs to know who owns what percentage of the ownership. Finally, he will record the actual selling price for each property sold. John also pays past clients for referring other people to his agency. When such a referral results in a sale, he pays the referring client a small cash fee.

Finally, John sometimes sells properties that are listed by other agencies. For this case he wants to know which agency listed the property by tracking its name and main phone number.

## Tasks

Each group will produce:

- An Entity Relationship Diagram (ERD) of their design using DRAW.io or other electronic software. Include both the save file for the ERD and a PDF of the final ERD (in case I can not load it).
- An .sql file for the creation script for creating all tables, fields and relationships in the database

- a second .sql file that contains insertion scripts for inserting a minimum of 10 records per table where appropriate. This will be fake made up data, but it must make sense.
- In a third .sql file, produce Views to create a minimum of 4 reports that will enable John to see the state of his business, the properties currently for sale, a client list and a report of his total sales for a year of his choosing. (i.e. parameter input). **Note:** *You do not need to create the reports, just the views which will be used to feed the data to the report.*
- You will actually create the database tables and views in one group members database area and grant me permissions (user id:

Note:

- Design to 3NF
- All tables and views should use the prefix “a2”. Example: “a2Properties”
- Use the documented style guide for all naming, sql scripts and ERD formatting.
- Create meaningful names for all attributes and use PK for Primary Key and use FK for Foreign Key.
- Show all table names and column names

## Marking Schema

Marks will be given in a top down format. i.e. you start with a perfect mark and marks are removed for incorrect, incomplete and insensible work. Bonus marks will be given for work that goes beyond the scope of the requirements, but only for work that is exceptional, creative and beneficial to John Wick (the client).