ASSIGNMENT #1

Due: February 6 by Midnight 11:59 PM

By Team

Assignments submitted to the professor or the deadline is not respected would be discarded and no replacement submission will be allowed

Electoral Process Management System (EPMS)

We want to design a data management application on the electoral process. We assumed that the data covers only one election.

Citizen

All eligible citizens must be identified and we want to be able to find for each citizen's social insurance number (*SIN*), name (*name*) and telephone number (*telephone*). Each citizen is identified by its social insurance number. Primary key / unique

County

Pole

For every citizen, we want to retrieve the electoral pole where he has to exercise its voting rights (one and only one per citizen). The electoral map divides the territory into counties and each county is divided into poles. A county is identified by the county (*county_id*) and we want to find the name of the county (*county_name*). A pole is identified by the county (*county_id*) which is added to the identifier of the pole (*pole_id*) generated to distinguish the different poles of the same county. The pole identifier can be used in different counties. We want to find the address of each pole (*pole_address*).

Candidate

Party

Each citizen votes for a candidate for deputy in his county. A candidate can appear in one county. We want to be able to find for each candidate, his social insurance number (*SIN*), name (*name*), telephone number (*telephone*), age (*age*), gender (*gender*), his party and the county where he reports to the deputy. We also want to preserve the following information about recognized party: name of the party (*party_name*), address of the official local (*party_address*) and telephone number (*party_telephone*).

Leader

For each party, we want to know who their leader should be a candidate officially recognized. For the leader of the party, we want to preserve, in addition to the information relating to the status of a candidate on deputy, the date of his election as party leader (*leader_date_elected*).

Every citizen can make one or more monetary contributions to one or more parties. For every citizen, we want to preserve, if applicable, the total amount (*amount*) that contributed to each party.

QUESTIONS

1) Provide an entity-relationship conceptual diagram that models the above case. Specify cardinalities and use a verb to represent relationships between entities (or tables). (**20 points**)

2) Provide the logical diagram of your conceptual diagram. Specify integrity constraints by mentioning the primary keys and foreign keys for each table. (**20 points**)

3) Provide a relational diagram of your logical diagram. For each entity or relationship set in the model (design), determine which attribute(s) form the key. (**10 points**)

Submitting Assignment #1

- Naming convention for WORD file: Create ***one (.doc or .pdf) file***, containing your solution file (.doc or pdf) for your assignment using the following naming convention:

  The zip file should be called *A#_Team_Name*, where # is the number of the assignment *Team_Name* is your student teammate name.

- Submit your zip file in the appropriate assignment folder on submission Website. Assignments submitted to the professor or the deadline is not respected would be discarded and no replacement submission will be allowed.
- Submit only **ONE version per team** of the assignment. It is not an individual submission. If more than one version is submitted the last one, before the deadline date, will be graded and all others will be disregarded.

Evaluation Criteria of Assignment #1 (50 points)

Activities	Points
Q1: - Provide an entity-relationship conceptual diagram: 10 pts. - Specify cardinalities and use a verb to represent a relationship between entities: 10 pts.	20 pts.
Q2: - Provide the logical diagram of your conceptual diagram: 10 pts. - Specify integrity constraints by mentioning the primary keys and foreign keys, NOT NULL ... for each table: 10 pts.	20 pts.
Q3: - Provide a relational diagram of your logical diagram: 5 pts. - For each entity or relationship set in the model (design), determine which attribute(s) form the key: 5 pts.	10 pts.