

## CSCI 335 – Database Project (20%)

### **Crime Reporting System**

The objective of the project “Crime Reporting System” is to provide a facility for the residents and police to report and respond to crimes reported. For that reason, the database should be composed of following information:

- Residents are identified by Social Security Number, and has a full name (first, middle and last), contact number, address (city, street and apartment), gender and date of birth.
- Residents can report a crime happening around to the police station.
- A Crime Report is identified by an ID, the date and time of witness, the location (city, street, apartment), description, Set of Images Captured, status and the policeman who received the report.
- Crimes are categorized by categories and have a degree of affection. Each category has a code and name.
- Policemen are identified by their Social Security Number, and has a full name (first, middle and last), contact number, and address (city, street and apartment), joining date and salary.
- After receiving a crime report the police station has to perform one or more response actions. Each response is defined by name, target, description, date and time of action, status and the policeman responsible of it.

*You can add any assumption and suggestion if needed.*

## Steps to be done

Step 1: Data Modeling - Create an ER diagram,

Step 2: Map ER diagram into a relational model,

Later: Step 3: Put the tables in the 3rd normal form,

Step 4: Create your tables and fill them with few records of logical data,

Step 5: SQL Queries (mentioned Below),

Step 6: Five Complex SQL Queries: Write additional five complex queries (such as intersection, union, difference, join aggregate, ...etc.) you find useful for your application. Avoid using simple and easy queries.

## SQL Queries

- Insert a new Category having the following info: code is **PUBLIC**, name is **Social Security Threat**
- Update the name of the policeman whose ssn is 112233.
- List the names of residents in Beirut City.
- List the name of policemen who joined after 1/1/2021 ordered alphabetically.
- List the ID and status of the crimes reported to the Policeman named "John Smith".
- List the number of pending crimes.
- The ID of crimes that were reported to "John Smith" or had an action done by "John Smith".
- The total number of crimes in each city.
- The name of residents who have reported more than two crimes.
- The number of responses for each crime witnessed today.
- The number of crimes in each category
- The ID of crimes