CS307, Spring 2018

Assignment 1

An Archeological Society has been recently created to organize a database for researchers that contains data about archeological objects found on various sites, the location of these sites, museums where these objects are on display as well as book referring to these objects or to the civilizations they are related to.

The information managed by the Archeological society is composed of the following pieces of information:

OBJ_DESC	Short description of an archeological object	30 character string
OBJ_TYPE	type of the object	15 character string
OBJ_DATE	Approximate date of an archeological object	15 character string - cannot be a precise date
OLD_CITY_NAME	Former name of a city	20 character string
CITY_NAME	Current (modern) name of a city	20 character string
MUSEUM_NAME	Name of a museum	20 character string
SITE_NAME	Official name given to an archeological site	20 character string
CIVILIZATION	Civilization or period associated with an archeological object	20 character string
BOOK_TITLE		40 character string
PUBLICATION_DATE		date value
PUBLISHER_NAME		30 character string
AUTHOR_NAME		20 character string

Additionally we have the following details:

- An object comes from one and only one archeological site.
- A site can be geographically spread over several cities.
- Museums are located in cities.
- A book can talk about one or several sites.
- A book can also talk about particular objects.
- A book can have several authors.

As a simplification, we'll assume that a city cannot have had more than one different name in the past.

What you are asked to do:

Design a database allowing to manage all the above information. You'll design the database using MySQL Workbench, a tool frequently used for database modeling, which can be downloaded for free from https://dev.mysql.com/downloads/workbench/ (you are at one point prompted for registration but you don't need to register, there is a "No, thanks" option).

You are expected to add comments to most tables and to at least 10% of the columns (out of 10 columns, 2 usually deserve comments)

Meaning of the column flags (ignore whatever is in grey):

- **PK: PRIMARY KEY**
- **NN: NOT NULL**
- **UQ: UNIQUE INDEX**
- **BIN: BINARY**
- **UN: UNSIGNED**
- **ZF: ZEROFILL**
- **AI: AUTO_INCREMENT**
- **G: Generated Column**

You will be careful to indicate:

- What information is mandatory, and what is optional. A table should always have at least one mandatory column (mandatory is indicated by "NN", standing for "Not Null", in MySQL Workbench)

- What uniquely identifies a row in a table (key). You can click on PK in the column descriptions to indicate columns that belong to the Primary Key. Alternatively, you can create a numerical identifier that will increase automatically (AI for "Auto-Increment" column property in MySQL Workbench) if you find it more convenient, but you must in that case define either a "unique" column in the column list or, if it's a combination of columns that cannot be repeated, go to the "Index" tab and create an

index identifier that has the UNIQUE property and is made of several columns (indexes will be explained much later in this course)

- What are the links between tables - when only values that can be found in a column of a table are acceptable in a column of another table (it's known as foreign keys). You should go to the "foreign keys" tab to indicate the links between tables. Every table should be linked to at least one other table.

You'll upload the resulting .mwb file in Sakai when you are happy with your result.