Ryerson University

CIND-110
Data Organization
for Data Analysts

Assignment I
On Reverse/Forward Engineer Existing Datasets

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Due-date:
July 14, 2018
11:59 PM

1. From the course shell, download the RAR file (eclipse20161117.sql). Then, save the SQL file (eclipse20161117.sql) on your local machine.

2. Make sure that MySQLWorkbench tool is establishing a connection to the target database server on your machine.

3. After a connection is established to the database server, execute/run the SQL file using the SQL Editor panel.

4. The output from SQL statements execution should appear as a single dataset that combines five different relations (t_change, t_file, t_history, t_people, t_revision).

5. The description of the attributes of each table can be found here [1]

6. Use MySQLWorkbench tool to specify the *primary* and *foreign* keys for each table in your database to uncover the relationship between different entities. For each relationship, define the cardinality and direction; whether it is *one-to-many*, *one-to-one*, *or many-to-many*.

7. Use MySQLWorkbench tool to reverse engineer the existing database into a logical data model, and **SUBMIT** the generated data model in .MWB format along with a screen-shot either in .JPG or .PNG format. Note that, the submitted logical model should cover tables, attributes, keys, mandatory role constraints, and referential integrity with no regards to the physical implementation.

8. Use workbench tool to forward engineer the logical data model, and **SUBMIT** the generated script in .SQL format. Note that, the submitted script should cover only the structure of the tables and not the data stored in them.

9. **Bonus Question**: **SUBMIT** a script that covers the data stored in the tables along with the structure of those tables.

Reference:

[1] X. Yang, R. G. Kula, N. Yoshida and H. Iida, "Mining the Modern Code Review Repositories: A Dataset of People, Process and Product," 2016 IEEE/ACM 13th Working Conference on Mining Software Repositories (MSR), Austin, TX, 2016, pp. 460-463.