COMP 3311 Assignment 1 (ER diagram) Spring 2020

Due date: 3rd Mar. 2020

(11:59 am according to Canvas clock HK time)

Assignment Rules:

1) This is an _individual_ assignment. The assignment solution you submit must be solely your own work; copying or letting others to copy are both considered cheating.

2) **No late submission will be accepted !**

Assignment description and specification:

You are required to create an Entity-Relationship (ER) diagram for the following scenario of a theater. Your ED diagram should clearly show all the entities (words **in bold** in the scenario description), relationships, attributes, keys (underline the primary keys with solid lines, underline the discriminator(s) with dashed line(s)). Assume all the relationships are binary. Your ER diagram should also show the cardinality constraints and the participation constraints. If you have additional assumptions, clearly specify them. The notation should follow the course slides.

Consider the following scenario of a theatre:

- A theater has several **show(s)**. Each **show** has a unique show ID, a name, the number of seats open to the audience. A **show** may belong to a series of **shows** such that a **show** can be the sequel of other **shows**;

- Each **show** can be performed several times. For each **show performance**, there is a unique performance ID, a date, a start time, an ending time and the duration;

- The theater has some **directors** who direct the **show performances**. A **director** has a unique staff ID, a first name, a last name, an email address, phone number(s), and specialty(ies);

- Each **show performance** is required to be directed by exactly one **director**;

- For each **show performance**, there must be exactly one **director** who is in charge of the management. A **director** can only be in charge of at most one **show performance** at a time;

- The theater also has several **performers** who perform in the **show performances**. Each **performer** has a unique performer ID, a first name, a last name, an email address and a phone number;

- For each **performer**, he or she is either full-time or part-time (but not both). For full-time performers, their monthly salary is stored; for part-time performers, their hourly rate is stored;

- It is compulsory for each **performer** to perform exactly one **show performance** at a time. A **show performance** could be performed by zero or more **performer(s)**;

- A **performer** must declare one preferred **show performance** at a time. A **show performance** could be preferred by zero or more **performer(s)**;

- A **director** may prefer zero or one **performer** to work with. It is possible for a **performer** to be preferred by zero or more **director(s)**;

Submission:

- You need to submit a clear **.pdf** version (in 2 A4 pages) assignment to Canvas. Please check out detailed instructions in the following link:

  https://canvas.ust.hk/courses/29896/assignments/100364