Database Fundamentals (TIS1101) / Database Systems (TDB2111) Group Project (20%)

Project Descriptions:

You are to work in a group of 2 to 3 persons (max 3 students per group). No individual project is allowed unless with prior approval from your respective lecturer. Please form your group within the SAME TUTORIAL section.

The following is a list of project titles:

1. Bookstore point of sale (POS) and inventory system (keep track of books purchased by customers and manage day-to-day inventory)
2. Food ordering system (allow users to place and manage their orders)
3. Vehicle booking management system (allow users to book vehicle and manage their bookings)
4. Lazada shopping cart (keep track on the vendor, customer, deals, quantity on hand, categories, sales, voucher credit, rating, and so on)
5. Car service center (deal with managing the service appointment, type of services, mileage, service outlets).
6. MMU academic advisory system (allow lecturers to monitor their advisee progress)

Each group can only select ONE project title to work on. Students have the freedom to define their own business rules and scope of the project. Your database design should reflect on the defined business rules and scope. You are expected to use **IBM DB2** for this project.

Your project will be evaluated based on the following items:

PART 1: DESIGN [35 marks]

i. List out the possible **Business Rules**.

ii. Identify all the entities, attributes and relationships from the given scenario. Draw the **Entity-Relationship Diagram (ER-D)** to show the relationships between the entities. The ER-D should be based on Crow's foot model. Please take note that your ER-D should contain *at least* 6 entities and *at most* 10 entities.

iii. Prepare a **data dictionary** for your database. Please ensure that all tables are normalized.

PART 2: IMPLEMENTATION [60 marks]

i. All **DDL** and **DML** scripts used to create the tables and manipulate the data in the database need to be documented. Please also provide screenshot(s) of the results every time a query is executed.

Example: Select * from Invoice

INVOICE_ID	ITEM_ID	INVOICE_QTY	INVOICE_PRICE
10010	659	2	1,801.98
10011	879	26	2,564.90
10012	989	8	7,841.68
10013	965	10	16.40

Each table should consist **at least 15 rows**.

For **DML**, please ensure that you cover the following items:

i. At least one aggregate function (*count*, *max*, *min*, *avg*, *sum*)
ii. At least one query with a *group by* and *having* clauses
iii. Triggers
iv. Stored procedure
v. View
vi. Use of subqueries/nested queries
vii. At least two queries not covered in lecture such as display the top *n* records, auto increment by 1 for every new row inserted, etc.

PART 3: ORAL PRESENTATION [5 marks]

Submission deadline: 5th February 2018 (Monday) 12p.m. Each group is to submit only one report (hardcopy and softcopy in CD), which consists of the items in Part 1 and Part 2. Project is not to be submitted via email.

Presentation is in Week 13 (during your tutorial section). The content of presentation should reflect the content of the report submitted.

Late submission, non-contributing members or plagiarism of content is to be penalized with zero mark.

***title booking page is to be submitted to your respective tutor by Week 4*

Group Project

TIS 1011 / TDB 2111
(Database Fundamentals / Database Systems)

Put the Selected Title here

Prepared by

Name, ID, email <*Team Leader*>
Name, ID, email <*Team Member*>
Name, ID, email <*Team Member*>