TIS3351 Advanced Database
Trimester 2, Session 2021/2022
Faculty of Computing and Informatics
Multimedia University

Submission Date : 11th Apr 2022, noon

Individual Assignment

This is an individual assignment. STRICTLY NO COPYING from other sources except text or diagrams given in this course. If detected all parties involved will get 0 marks.

Assignment 2

In this assignment, you assume the role of a data architect in a new company active in the area designated to you based on the last digit of your student id.

Example 1: Student id 123456789, write a complete program on area No 9 (Sports Activity).
Example 2: Student id 123456731, write a complete program on area No 1 (Restaurant/Eatery).

Last digit	Area
0	Utility Bills
1	Restaurant/Eatery
2	Tourism
3	Hospital/Clinic
4	Hotel/Chalet
5	Cinema/Entertainment outlet
6	Human Resource
7	Transportation
8	Social media
9	Sports Activity

Design two information systems for the company. One for the first five years of the company when the company can afford to use mainly open source and free software, and some proprietary software if needed. The second for the company when it is matured after five years and is ready to be active in international markets. At this stage, the company can afford to pay for licensing fees and support from application vendors.

In the report to be submitted, describe the **company activities** with reasonable assumptions, the **information systems requirements and use cases** and the **potential**

benefits of the information systems you are going to propose. You can model your assumptions based on a real company or an imaginary company.

Show your design with **data flow diagrams, architecture diagrams other appropriate diagrams**. The design should consider whether to include the systems and concepts discussed in this course. They are

a. Data Warehousing

b. Distributed Database

c. Transaction Management and Concurrency Control

d. Database Administration and Security

e. XML Database

f. Object-Oriented and Object Relational Database

g. Special-Purpose Database Systems

Explain the design decision for each corresponding concept.

Include the name of actual products in the architecture diagrams and include the references to those products using a table as shown below.

Product Name	Web Link
Product A	[web link]
Product B	[web link]
Product C	[web link]
...	...

Deliverables

a) A report in PDF

Additional Info on Deliverables

i) In the PDF file, insert the following information at the top of the file.

```
Name: Jason Morgan
ID: 1071001234
Email: abc123@yourmail.com
Phone: 018-1234567
```

ii) Submit your assignment through MMLS.

Evaluation Criteria

Mark Sheet

Criteria	**Max**	**Actual Marks**
Company activities	3	
IS requirements and use cases	3	
Potential benefits of the information systems	3	
Data flow diagrams, architecture diagrams other appropriate diagrams	6	
Design decisions	7	
Product names and web links	3	
Lab submissions (Best 10 submissions)	15	
Total	40	

Each criteria will be evaluated based on correctness, complexity, reasonable assumptions and fulfillment of requirements.