COURSEWORK QUESTION PAPER: **Autumn Semester 2018**

Module Code:	DipIT07
Module Title:	Introduction to Database Systems
Module Leader:	Deepson Shrestha
Coursework Type:	Individual
Coursework Weight:	This coursework accounts for 50%of your total module grades.
Submission Date:	Week 14, 3pm
Submission Instructions:	Submit the following to iAcademy's and your institute's RTE department before the due date: • Softcopy – Report and Database Files (You must submit a PDF file. Any other format will be rejected.)

Academic Misconduct Notice

iAcademy and its University Partners take any form of Academic Misconduct such as Plagiarism seriously. Examples of Academic misconduct include but are not limited to the following:

- Falsifying coursework data and results
- Plagiarism of another person's work and presenting it as your own
- Collusion to present work jointly completed as your solely own
- Assisting in any of the above activities

Remember, copying someone else's work is an offence without acknowledgement, whether it is text or diagrams, from paper or from electronic sources.

Introduction:

The purpose of this assessment is to enable students to demonstrate their academic skills in the following:

- Research on Database Trends and Technologies
- Prepare Relational Model
- Implement the model using Relational DBMS
- Implement SQL on the created database

Coursework Instructions:

- This coursework is to be given out during Week 4.

- Students must work individually to attempt this assessment. Where there are exceptional circumstances, students may seek approval from the module lecturer/tutor to attempt this coursework in smaller groups.

Coursework Deliverables:

- Students are required to submit the hardcopy and softcopy of their report. Students are also required to submit the softcopy of their Database file(s).
- The softcopy files shall be named as follows:
  - S20DipIT07A1 CW Report <Student ID>
  - S20DipIT07A1 CW Database File <Student ID>
- No submission constitutes an automatic failure.

In the Event of Failure:

- Students that fail this assessment component will be required to revise and re-submit their coursework (Report and Database file) to iAcademy's and your institute's RTE department for grading before a designated deadline during the re-sit period.

The maximum grade that can be obtained for all re-sit assessment components is Grade E.

TOPIC:

SCHOOL MANAGEMENT SYSTEM

Based on your assumption. You should have at least 10 entities.

Course Work Details

Please read through the Sections. Each section contains different sets of questions which need to be answered sequentially.

1. **Title Page**

   In the title page, you have to write your desired title for your project.

2. **Table of contents**

   In this section, you have to write the outline for your table of contents.

3. **System Description**

   For system description, you have to write at least a minimum of 200 words.

4. **Data Dictionaries**

   For Data Dictionaries, you have to write the descriptive details of each field in every table.

5. **Entity Relationship Diagram**

   You have to draw an ER diagram that supports your system.

6. **Create Databases and Tables / Insert sufficient Data**
7. **Select Statements using Different Functions**

   In select Statement using different functions, you to create questions and you have to provide solution in a query form. **Minimum of 20 Select**

Statements (*See Example Image below*).

Write a query to display the students name in lower and capital letters.

   a. Solution

     SELECT LOWER(First_name)as "First name", UPPER(Last_name) as "Last name" FROM tblstudent where Last_name like 't%' order by Last_name asc;

   b. Result

First name	Last name
maybelane	TABINO

1 Result(s) Found

8. **Select Statements using Sub Query (Minimum of 3)**

Same with outline number 7. You have to provide questions with solutions.

(*see example below*)

Create a query to display the first and last name of the student who live in Laguna, Philippines.

   a. Solution

     SELECT First_name as "First name", Last_name as "Last name", Address from tblstudent where Address = (SELECT Address from tblstudent where Address like '%Laguna%');

   b. Result

First name	Last name	Address
Karl	hitoos	Laguna, Philippines

1 Result(s) Found

9. **Select Statements using Count and Group Functions (Minimum of 2)**

Do the same what we did in number 7 and 8.

10. **Select Statements using Different Joins (Minimum of 5)**

Do the same what we did in number 7 and 8.

11. **Insert Statement (Minimum of 5)**

Do the same what we did in number 7 and 8.

12. **Update Statement (Minimum of 5)**

Do the same what we did in number 7 and 8.

13. **Delete Statement (Minimum of 5)**

Do the same what we did in number 7 and 8.

14. **Normalization**

By the help of real example, describe the 1NF, 2NF and 3NF in detail.

15. **Appendices**

END OF COURSE WORK

Report Components:

The report shall consist of the following key components.

Components	Guidelines
Cover Page	Report Title, Module Title, Centre Name, Student Names, Student IDs, Date of Submission.
Tabular Structure	A tabular representation of Database with their corresponding clients is essential. Include Screen Shots with References.
Database	Relational Database such as MySQL or MariaDB can be used.
ERD	An automated tool such as SQL Designer or MS Visio or such tools may be used to create Entity Relationship Diagram.
SQL	The report should contain screen shots of allSQL statements along with their output.
Conclusion	The students must evaluate their work, reflecting what they have learnt, what they have found difficult and how they overcame the difficulties.
Appendices (if any)	Any external content that might be used to support the clarity and credibility of points mentioned in the report.

Style Sheet for the Report:

These guidelines MUST be followed in writing up the Report

- Use A4 paper, printed single sided
- Font – Arial

- 12-point size for normal text, 14-point size for headings

- Line spacing of 1.5 between lines of text

- Leave a blank line between paragraphs

- Page numbers are a must

- Use Spell Check – there should be NO words spelled incorrectly

- Referencing (Harvard style referencing) is needed where ever necessary. Reference correctly (a properly structured list at the end of your Report detailing all the books, web sites etc. you have cited)

- Pay attention to all points of punctuation and grammar

- Be professional (no childish clip-art or decoration)

- Use formal language (Don't use '*don't*' or '*wouldn't*' etc. – say '*do not* 'or '*would not*'. *Do not use 'lots of' or 'lots', 'basically', or other imprecise words.*)

- Grammar - Use the third person where possible (Don't use the word 'I' or 'you')

- Protect your work by putting your group name and the module code in the footer of each page

- If you are asked to submit a physical copy - Make sure you bind your work so that there are no loose pages.

Marking Guidelines

This coursework accounts for 50%of your total module.

The marking scheme for the Database shall be as follows:

SN	Title	Marks	Comments
1	Appropriateness of Research	/5	
2	Proper Listing of Data of Researched Database	/5	
3	Normalization With Examples	/10	
4	Identification of Entities and Attributes of Given Scenario	/10	
5	PK and FK Creation and Referential Integrity	/5	
6	ER Diagram	/20	
7	Proper use of Insert and Create Command	/5	
8	Proper use of Select Command	/5	
9	Proper use of Update Command	/5	
10	Proper use of Delete Command	/5	
11	Proper use of Insert Command	/5	
12	Proper use of Select and Function Command	/5	
13	Proper Use of Sub-queries	/5	
14	Proper use of Join	/10	
E	Viva	A/B/F	*F means fail in the overall coursework.

*Viva Guidelines:
Assess the student's general knowledge of the CW contents and originality of the coursework using several cross questions pertaining to the CW.
Grade based on:
A: Student shows higher proficiency in the knowledge of SQL commands as well as other parts of the coursework

B: Student shows enough proficiency in the knowledge of SQL commands.

F: Students shows no proficiency/knowledge or missed the viva altogether.

END OF COURSE WORK