**Middle East College**

# COMP0336A - Database Security

## Individual Assignment & Presentation Fall 2017

**Submission deadline**: Date and Time:
**Work Proposal: Saturday, 09th Dec 2017 23:59**
**Complete Assignment: Saturday, 30th Dec 2017, 23:59**

**Presentation Date: Sunday, 31st Dec 2017 (04.00 PM to 07.00 PM) For Session B and Thursday, 04th Jan 2018 (10.00AM to 1.00 PM) FOR Session A**

**Total Marks: 100 to be scaled to 25;**

**This assignment will assess the following learning outcomes:**

| Learning Outcomes | Skills Acquired |
|---|---|
| 1. Manage user access and user profiles within a complex DBMS | Critical Thinking, Problem Solving, Application |
| 2. Conduct database audits | Critical Thinking, Analysis |
| 3. Develop backup and recovery procedures | Critical Thinking, Application, Problem Solving |

**Read the given scenario and perform all tasks. You have to answer all questions with respect to Database Security concepts.**

Hamdah is an owner of a budget airlines company, which is performing the operations such as issues and returns of the tickets using a single-user database system. Currently there are limited number of employees in the company and Ms. Hamdah is facing a challenge of overcrowded customers to book the tickets. Customers do complain about the long waiting hours and staff also complain about the stress during working hours. So Ms. Hamdah wants to upgrade the operations of her airlines company into a full-fledged multi-user and web enabled database system. In the first phase Ms. Hamdah wants to store information about available flights, clients/customers/members, issuing tickets and undertake modification of issued tickets.

Tickets will have their own unique numbers. Each ticket can be used for one or more passengers. Each ticket can be re-issued with the same number, as and when a modification is done.

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**TASK #1:  10 Marks**

Submit on Moodle a Work Proposal for this assignment by the end of 9<sup>th</sup> Dec 2017 before 23:59 which must include:

- Understanding on deliverables – a brief description of deliverables/output for task 2 to task 4.

- General overview of proposed plan - initial understanding of solution to task 2 to task 4.

- Time line for completion of each task.

**Note:**  The Work Proposal should be typed in MS Word format only and should uploaded using the turnitin link given in Moodle.

**As a DBA, you have to suggest Ms. Hamdah about the different types of users including employees and ticketing agents and the necessary privileges on each of the database objects that can be granted to these users. In other words, you need to perform the following tasks:**

**Task 2:** Manage the user access on the different objects by giving proper privileges to the users. Give justifications on why you have granted the privileges to that user/s.                **(30 marks)**

   **Note:** You have to perform this task in the lab and provide the screenshots.

**Task 3:**  Write audit commands and at least one audit trigger to monitor and record the different operations done by the users created in Task 2.                **(10 + 20=30 marks)**

**Note:** You have to perform this task in the lab and provide the screenshots.

**Task 4:**  Read the given article "**The Business Implications of not having a Backup Strategy**" by Discuss what type of backup method you will implement for Ms. Hamdah's airlines company.  Justify your answer.

**(20 marks)**

**TASK #5:**

Presentation and Viva voce is a must. You are required to present and upload the presentation in Moodle. Presentation should contain 08 to 10 slides regarding the overall work done towards to this assignment and should get completed within 08 to 10 minutes; and 2 minutes should be given for clarifications.  **(10 Marks)**

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==No marks will be awarded for Task 1, 2, 3 and 4 if the student does not attend viva.==

**Evaluation Criteria:**

You would be evaluated on the following:

• Originality of answer, i.e. writing in your own words with some amount of referenced material.

• Oral examination: Your Assignment marks are based on the VIVA which will be conducted upon submission of assignment directly after the presentation (Task 5). The VIVA will be based on the tasks given in the assignment. ==ZERO mark will be awarded to the student if she / he is absent for VIVA.==

• Correct information analysis and presentation in document form.

• Adequate referencing and citation provided.

• Examples can be provided.

**<u>Guidelines</u>**

Follow the guidelines mentioned below for your assignment.

➢ Assignment should be **typed** and **uploaded to Moodle** and will undergo plagiarism detection test through Turnitin (a plagiarism detection tool)

➢ **Handwritten assignments will not be accepted.**

➢ Assignment should have a Title Page. Title Page should contain the following information.

  ▪ Assignment Name

  ▪ Class

  ▪ Student name

  ▪ Student ID

➢ It should have Table of Contents

➢ Use page numbers

➢ Assignment should be typed in your own words using **Times New Roman font size 12.**

➢ Heading should be with **Font Size 14, Bold, Underline**

➢ Use Diagrams and Examples to explain your topic.

- ➢ Copy paste from the Internet is strictly not acceptable.
- ➢ Reference should be included in the last page as follows
    - ▪ Author name, Book Title, Publisher, Year in case of books
    - ▪ In case of web site references type the full path of the web page with referenced date
    - ▪ In case of magazines/ periodicals type article name, magazine name, Issue Number and date

### Rules & Regulations

- The purpose of assignment is to do some research work; so you can consult books in Library or use internet or computer magazines or any other source.

# Clarification on Plagiarism Policy

As per MEC policy, any form of violation of academic integrity will invite severe penalty. Plagiarized documents, in part or in whole, submitted by the students will be subject to this policy.

# Plagiarism Policy

### A. First offence of plagiarism

a. If a student is caught first time in an act of plagiarism during his/her course of study in any assignment other than project work, the student will be allowed to re-submit the assignment once, within a maximum period of one week. However, a penalty of deduction of 25% of the marks obtained for the resubmitted work will be imposed.

b. Period of re-submission: The student will have to re-submit the work one week from the date he or she is advised to re-submit.

c. If the re-submitted work is also detected to be plagiarized, then the work will be awarded a zero.

d. Re-submission of the work beyond the maximum period of one week will not be accepted and the work will be awarded a zero.

e.   If the student fails the module and has a proven case of academic integrity violation in this module , the student is required to reregister the module

f.   If plagiarism is detected in   Project work (Project 1, Project Planning and Project Design and Implementation) the above clauses (a,b,c,d) do not apply and  the work will be summarily rejected. In these cases the student will be awarded a fail (F) grade and  is required to re-register the module.

## B.   Second offence of plagiarism

If any student is caught second time in an act of plagiarism during his/her course of study (in a subsequent semester), the student will directly be awarded zero for the work in which plagiarism is detected. In such cases, the student will not be allowed to re-submit the work.

If the student fails the module and has a proven case of academic integrity violation in this module, the student is required to re-register the module.

## C.   Third Offence of plagiarism

If any student is caught for the third time in an act of plagiarism during his/her course of study (in a subsequent semester), the student will be penalized with a fail in the module and shall be required to re-register the module.

## D.   Fourth Offence of plagiarism

If any student is caught for the fourth time in an act of plagiarism during his/her course of study (in a subsequent semester), he shall be suspended from the College for a period of one semester.

## E.   Fifth offence of plagiarism

If any student is caught for the fifth time in an act of plagiarism during his/her course of study (in a subsequent semester), he shall be expelled from the College.

**F. Amount of similar material**

a. The total amount of similar material in any form of student work from all sources put together should not exceed 30% (including direct quotations).

b. The total amount of quoted material (direct quotations) in any form of student work from all sources put together should not exceed 10%.

c. The total amount of similar material in any form of student work from a **single source** should not exceed 7 percent. However, cases having a similarity of less than 7 percent in such cases may still be investigated by the faculty depending on the seriousness of the case.

d. If faculty member find enough merit in the case of a student work with a similarity (with a single source) of more than 7 percent as not a case of plagiarism, the faculty member should provide detailed comments/remarks to justify the case.

### *Late Submission*

Penalty for late submission - 5% of the maximum mark specified **for each component of the assessment** (if there are multiple components of an assignment such as work proposal and main assignment where the date of submission is different for each component) will be deducted for each working day.

Assessment documents submitted beyond a period of one week after the last date of submission will not be accepted and will be marked as zero for that assessment.

*Note*: Must follow assignments instructions.

**Feedback to students:** Written Feedback in Moodle will be provided for Work Proposal and the Main Assignment within 10 days from the last date of submission.

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**Database Security (COMP 0336A)**
**Fall 2017**

Student Name:_____     Student ID:_____

**Assessment Sheet – Basic Assignment Analysis:**

| Task 1 | 0 | 1-5 | 6-10 | Mark |
|---|---|---|---|---|
| **Work Proposal** | No Work Proposal submitted | The submitted work proposal is Weak/Incomplete | Good Proposal covering all the required aspects such as timeline for completion of each task, description of clear understanding of the deliverables of tasks 2 to 4 | |
| **Task 2** | **0-10** | **11-20** | **21-30** | **Mark** |
| | Weak understanding of identifying the objects of Airlines Company and lack of ideas towards user management. | Unable to properly grant privileges with partial justification. Few syntax errors. | Good attempt in granting different privileges with proper justification. No syntax errors in the submitted SQL statements. | |
| **Task 3** | **0-10** | **11-20** | **21-30** | **Mark** |
| | Incorrect/invalid syntax/command in audit | Partially correct audit statements and triggers as per the given scenario. Some syntax error. | Good attempt. Able to write correct audit commands, correct trigger as per the given scenario. | |
| **Task 4** | **0-10** | **11-16** | **17-20** | **Mark** |
| | Weak understanding of the backup and recovery options. | Partial understanding of the backup and recovery options with good justification of the answer. | Good understanding and be able to properly justify the answer. | |
| **Task 5** | **0-5** | **6 - 8** | **9-10** | **Mark** |
| | Satisfactory presentation and able to answer some questions. | Good presentation and able to answer most of the questions. | Outstanding Presentation and be able to answer all the questions. | |

**Signature of Teacher**

| | |
|---|---|
| **Total Marks** | |
| **Penalty** | |
| **Final Marks** | |