**Tutorial 10**

# IE2042 – Database Management Systems for Security Semester 1, 2021

1. Name the major objectives of implementing database security.
2. What is the importance of a security policy?
3. Briefly explain the terms; principals, securables and permissions.
4. Consider the following scenario.

A software company has been assigned with the responsibility of automating the tasks of a private university. This include developing two databases to record student details and marks, and a library database. Dinesh, a newly appointed senior DBA is assigned to the project to handle all the administrative tasks related to the databases by the database architect. Dinesh creates the required databases and assign Janani the responsibility of managing the libraryDB. Janani assigns Raveen with the responsibility of creating tables. In addition, Raveen should be able to create views, stored procedures and triggers required. Sachini and Fathima, who are data entry operators are given the responsibility of inserting the data to the table. Namal is assigned with the responsibility of generating reports from the table in the data. For the above purpose, Namal could directly query the data or call functions and procedures.

* 1. Write a T-SQL statement to create the login of Dinesh, and provide him permission to handle all the administrative tasks in the server.
  2. Assuming that Janani has a login by the name janani.m, write a T-SQL statement required to assign her with the responsibility of handling the libraryDB.
  3. Assuming that Raveen has a login name raveen.j write a T-SQL statement required to allow him to create tables, functions, procedures and triggers.

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* 1. Write a T-SQL statements to add a user defined role which will provide permissions to perform activities for which Sachini and Fathima are responsible of.
  2. Using the role created in (d), provide permissions to Sachini and Fathima assuming that their usernames are sachini.s and fathima.m respectively.
  3. Assuming that Namal has a login name namal.k, write a T-SQL statement required to perform the tasks he is responsible of.
  4. Write a T-SQL statement to stop Namal from inserting data to any table in the database.
  5. Once the data entry process is over the permission granted to Fathima and Sachini should be removed. Write a T-SQL statement to remove the permissions granted to them in (g) by cancelling permission on the role they

are in.