Tutorial 07

7. 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.

   a. Write a T-SQL statement to create login of *Dinesh* and provide him permission to handle all the administrative tasks in the server.

```
CREATE LOGIN dinesh.p
WITH PASSWORD=’Dinesh@p123’
MUST_CHANGE, CHECK_EXPIRATION = ON,  CHECK_POLICY = ON,
DEFAULT_DATABASE=master

ALTER SERVER ROLE sysadmin ADD MEMBER dinesh.p
```

   b. Assuming that *Janani* has a login by the name *janani.m*, write a T-SQL statements required to assign her with the responsibility of handling the libraryDB.

```
USE libraryDB
CREATE USER janani FOR LOGIN janani.m
ALTER ROLE db_owner ADD MEMBER janani.m
```

c. Assuming that *Reveen* has a login name by the name *raven.j* write T-SQL statements required to allow him to create tables, functions, procedures and triggers.

```
Use libraryDB
CREATE USER raveen FOR LOGIN raven.j
ALTER ROLE db_ddladmin ADD MEMBER raveen.j
```

d. 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.

```
CREATE ROLE dataEntry
GRANT INSERT on libraryDB to dataEntry
```

e. Using the role created in (d), provide permissions to *Sachini* and *Fathima* assuming that their usernames are *sachini* and *fathima* respectively.

```
ALTER ROLE dataEntry ADD MEMBER sachini
ALTER ROLE dataEntry ADD MEMBER Fathima
```

f. Assuming that *Namal* has a login name *namal.k*, write T-SQL statements required to perform the tasks he is responsible of.

```
Use libraryDB
CREATE USER namal FOR LOGIN namal
```

```
ALTER ROLE db_datareader ADD MEMBER namal
```

g. Write a T-SQL statement to deny *namal* from inserting data to any table in the database.

```
DENY insert TO namal
```

h. Once the data entry process is over the permission granted to *Fathima* and *Sachini* should be removed. Write T-SQL statement to remove the permissions granted to them in (g) by cancelling permission on the role they are in.

```
REVOKE insert TO dataEntry
```