Caleb Cargill

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Database Design Final Project

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Security Model Description

For the security model of the FinancialService database, I have implemented four users, with varying permissions. The four users are finman (standing for Financial Manager), finadv (Financial Advisor), finenthus (Financial Enthusiast), and finclient (Financial Client). I have controlled permissions for each user by creating three non-default schemas, and restricting permissions to each user based on the schema. Following is a description of permissions for each schema. Below, is a table showing details of permissions per schema. Also below, a table showing database objects per schema.

The first non-default schema, which is the most restricted, is the Manage schema. The Manage schema contains the following tables: Account, Account_Type, User, Role, and Role_Type. It contains the following stored procedures: spUser_Create and spUser_Delete. The Manage schema allows all permissions to finman. Finadv is only allowed to update and select on this schema. Finenthus is only allowed to select on this schema. Finclient is not granted any permissions on the Manage schema.

The second non-default schema is the Advise schema. The Advise schema contains the following tables: Transaction and Transaction_Type. It also contains the SpUser_Read and the SpUser_Update stored procedures. Finman and finadv are granted full permissions on this schema. Finenthus is granted update and select permissions on Advise. Finclient is not granted any permissions on the Advise schema.

The third non-default schema is the Enthus schema. The Enthus schema contains the following views: vwUser_Account_Roles and vwUser_NetWorth. It also contains the function fnGetFinancialServiceNetWorth(). Finman, finadv, and finenthus are granted full permissions on the Enthus schema. Finclient is only granted select permissions on the Enthus schema.

Finally, the default schema, dbo, is left alone. All users have full permissions on this schema. However, no objects are intended to be left on this schema.

Breakdown of Permissions

User	Manage	Advise	Enthus	Dbo
Finman	Insert Update Delete Select	Insert Update Delete Select	Insert Update Delete Select	Insert Update Delete Select
Finadv	Update Select	Insert Update Delete Select	Insert Update Delete Select	Insert Update Delete Select
Finenthus	Select	Update Select	Insert Update Delete Select	Insert Update Delete Select
Finclient			Select	Insert Update Delete Select

Breakdown Of Objects/Schema

Manage	Advise	Enthus	Dbo
Account Account_Type User Role Role_Type SpUser_Create SpUser_Delete	Transaction Transaction_Type SpUser_Update SpUser_Read	vwUser_Account_Roles vwUser_NetWorth fnGetFinancialServiceNetWorth()	