

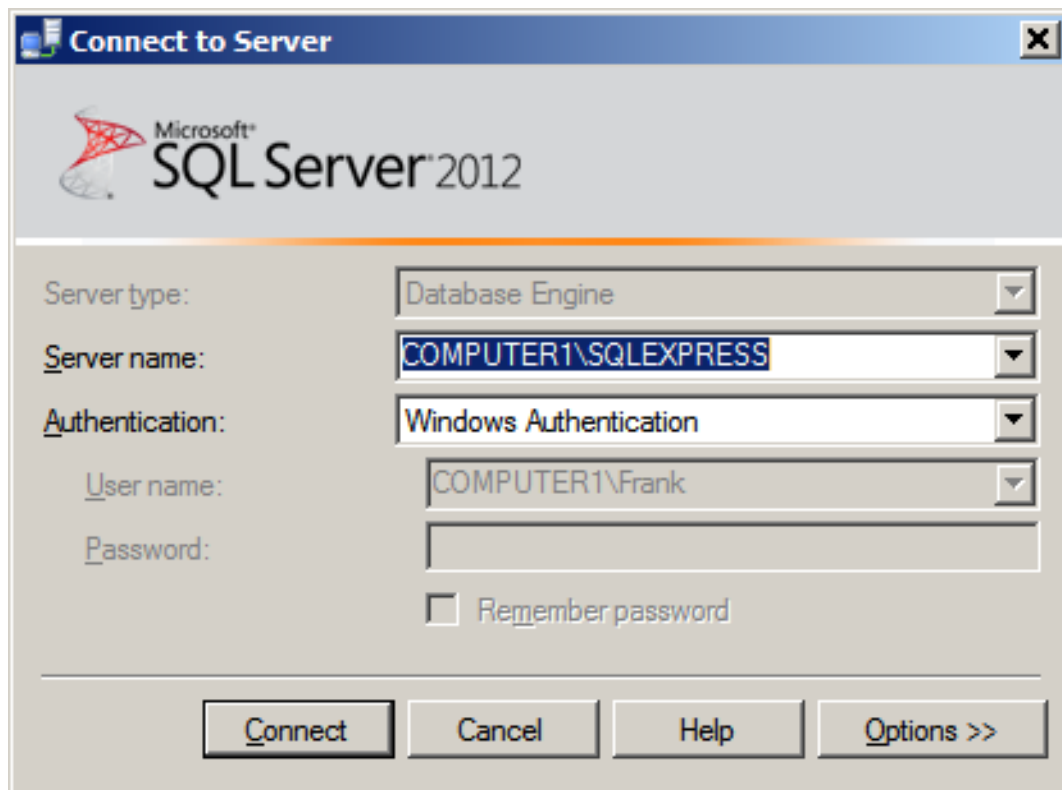
Comp 1630

Relational Database Design & UML

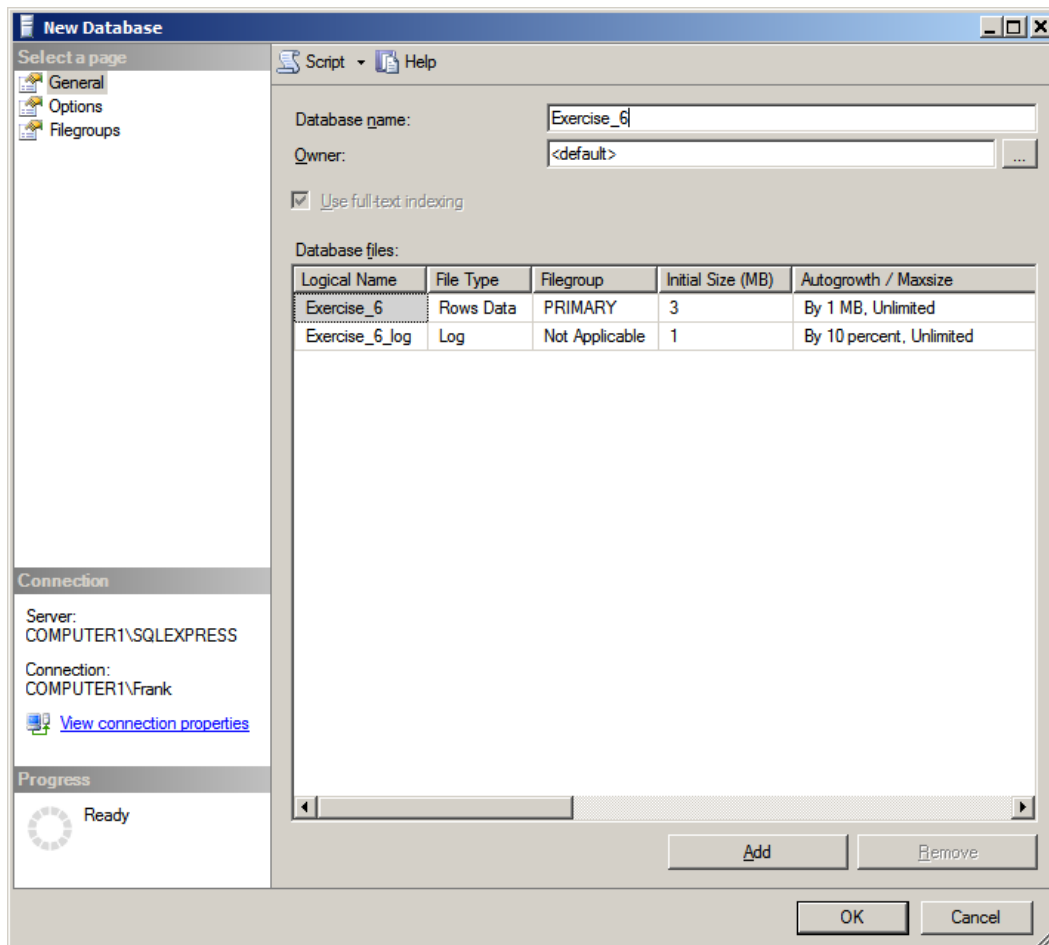
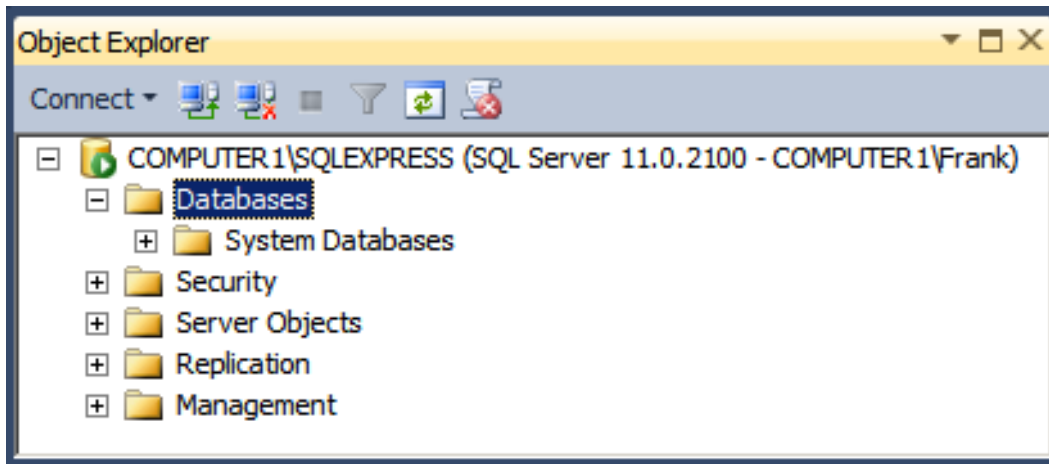
EXERCISE 6 – SQL Server Management Studio

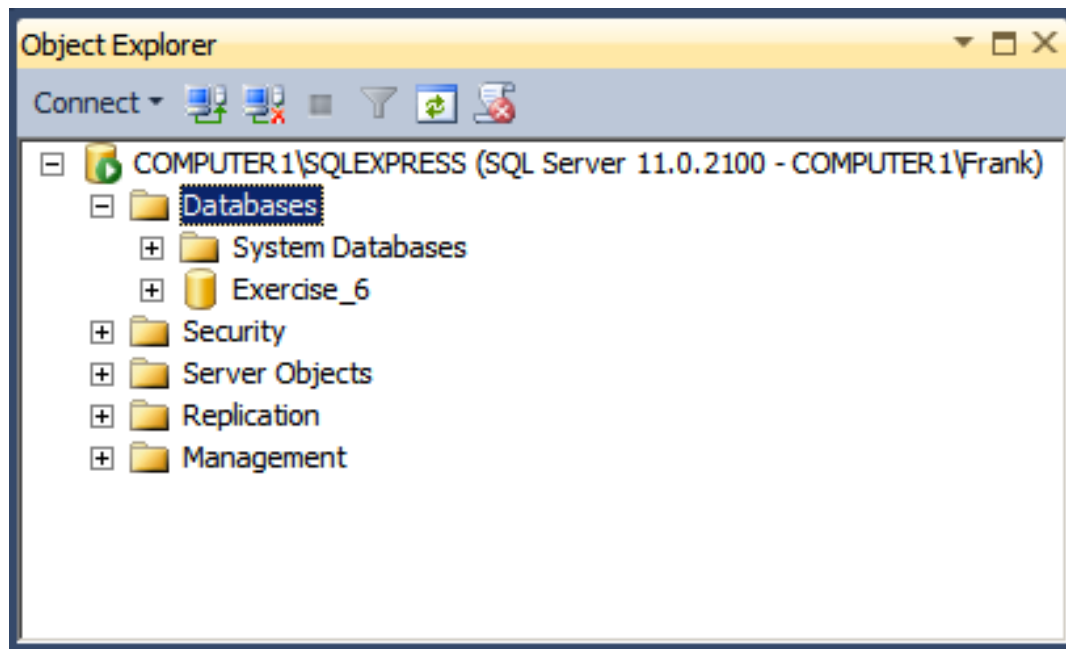
Complete the following using the [Microsoft SQL Server Management Studio](#) tool.

1. Launch and connect to SQL Server.

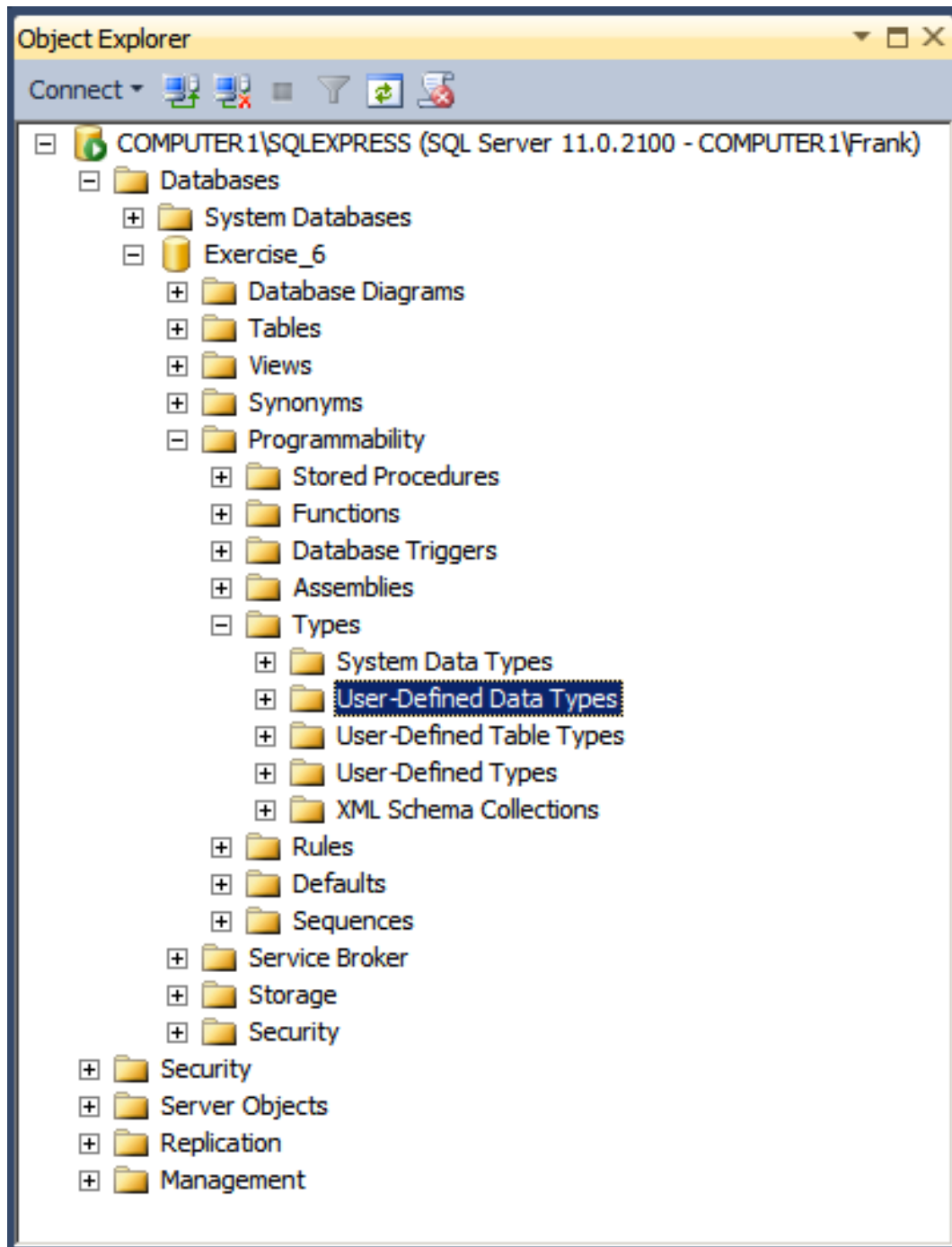


2. Create a database called **Exercise_6** (Right click).





3. Create a user-defined data type called **Id_Datatype**. This will be used for the Id columns to ensure consistent data type, length, and null ability.



New User-defined Data Type

Select a page

- General
- Extended Properties

Script Help

General

Schema: ...

Name:

Data type: ▼

Length: ▼

☐ Allow NULLs

Storage: bytes

Binding

Default: ...

Rule: ...


Connection

Server: COMPUTER1\SQLEXPRESS

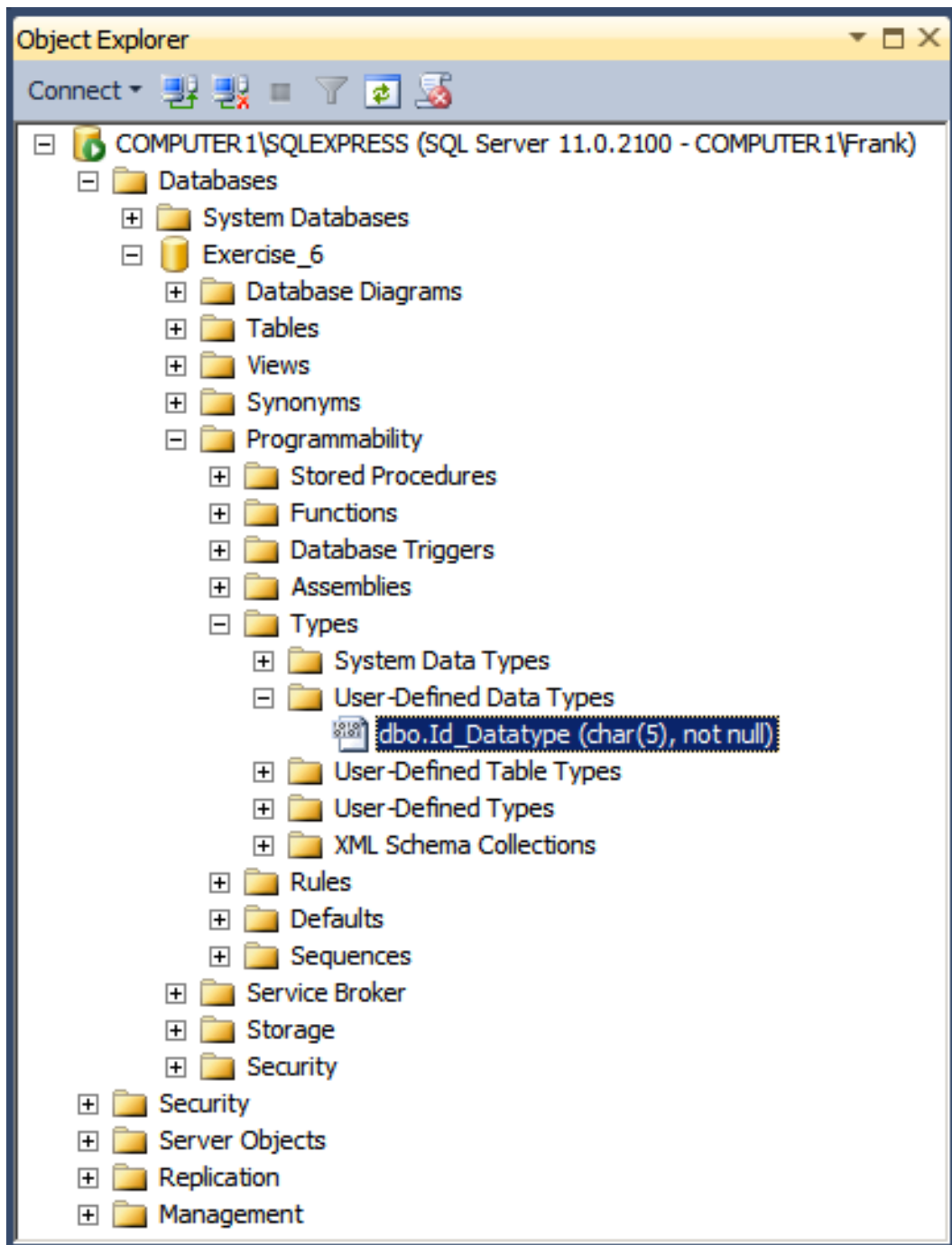
Connection: COMPUTER1\Frank

[View connection properties](#)

Progress

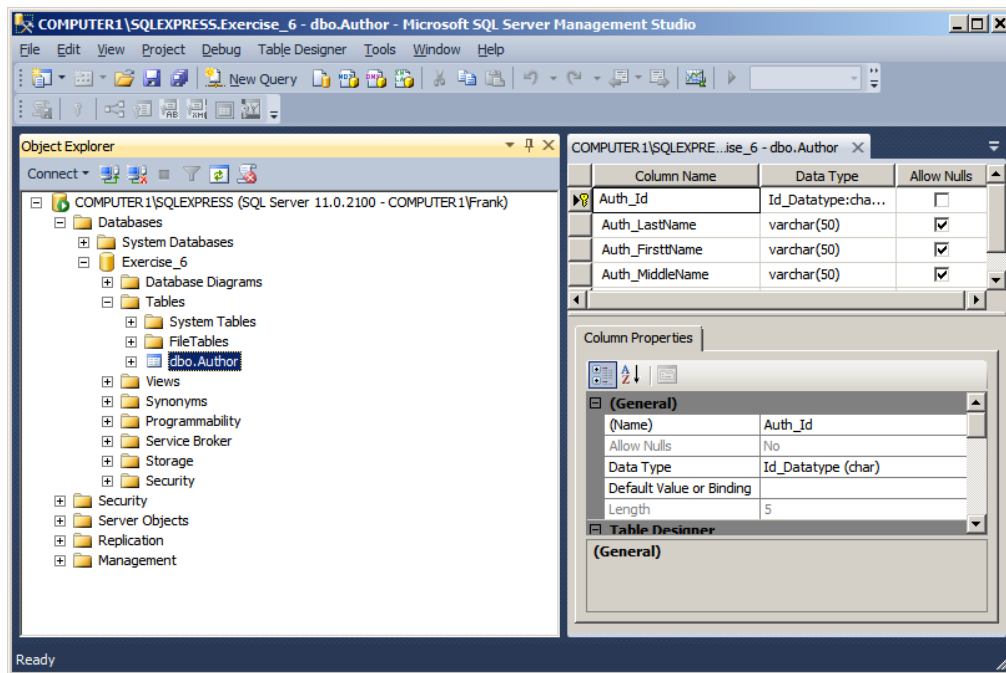
 Ready

OK Cancel

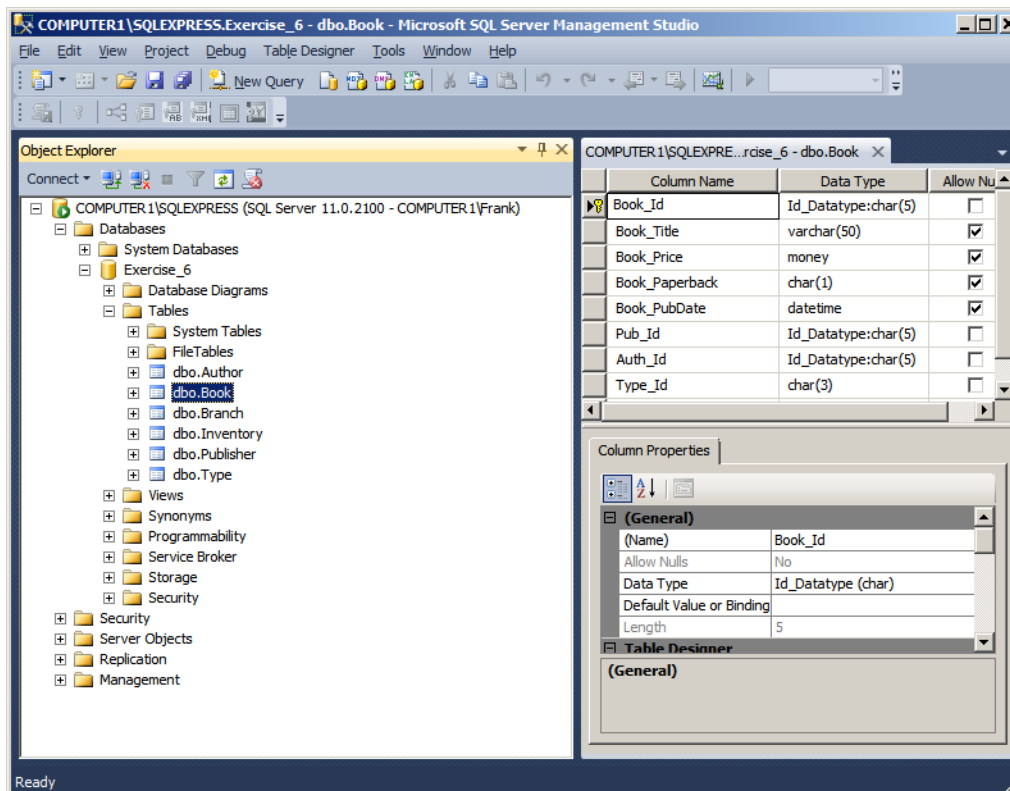


4. Create the following tables (see page 2 for column information):

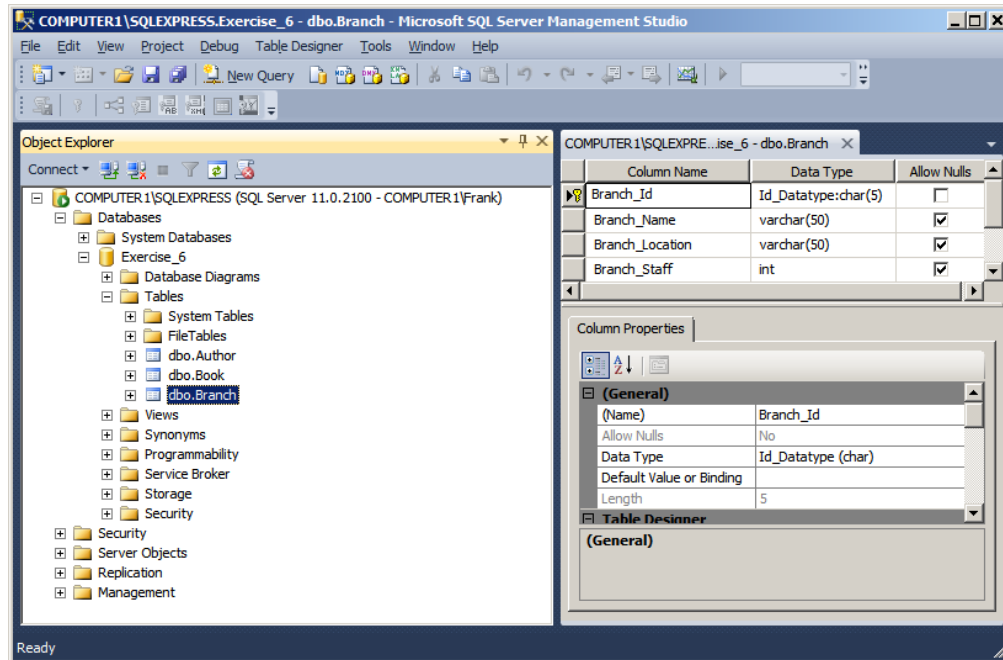
- Author



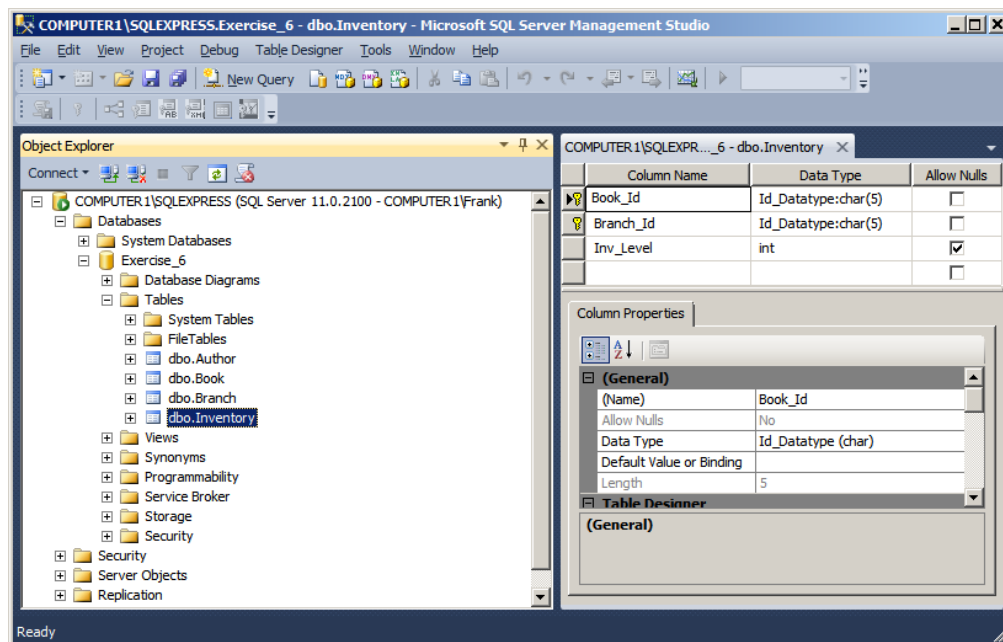
- Book



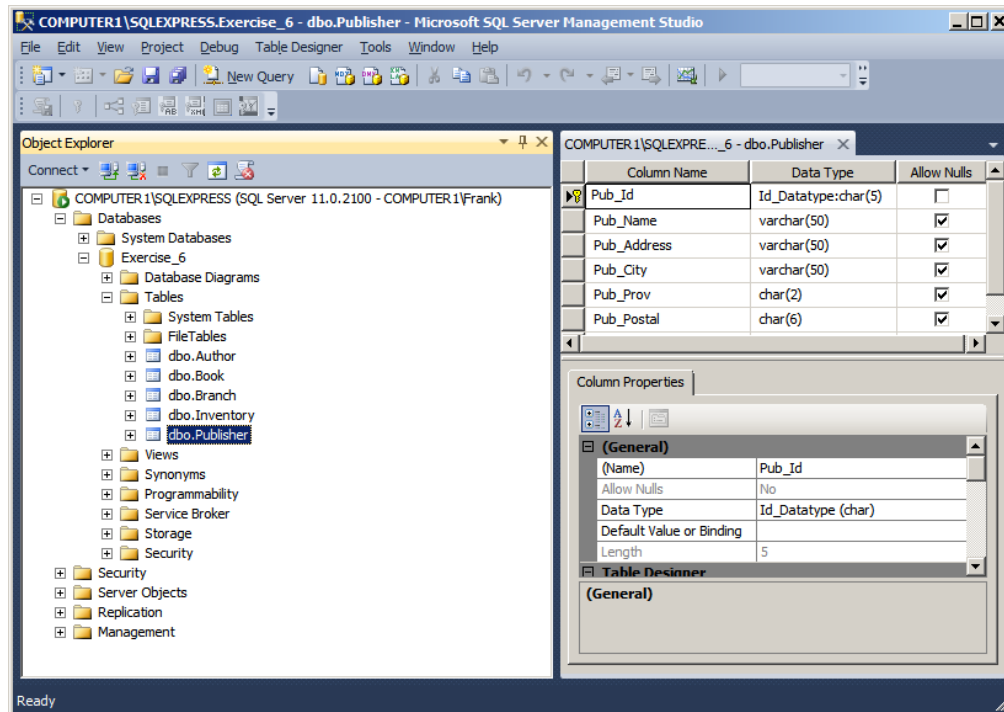
- Branch



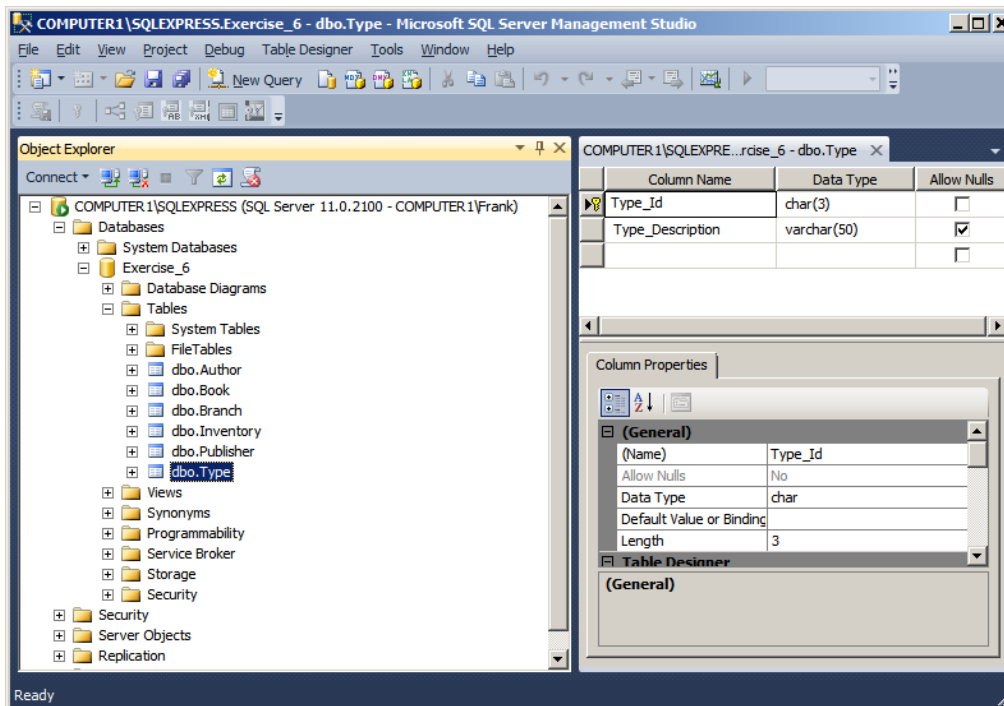
- Inventory



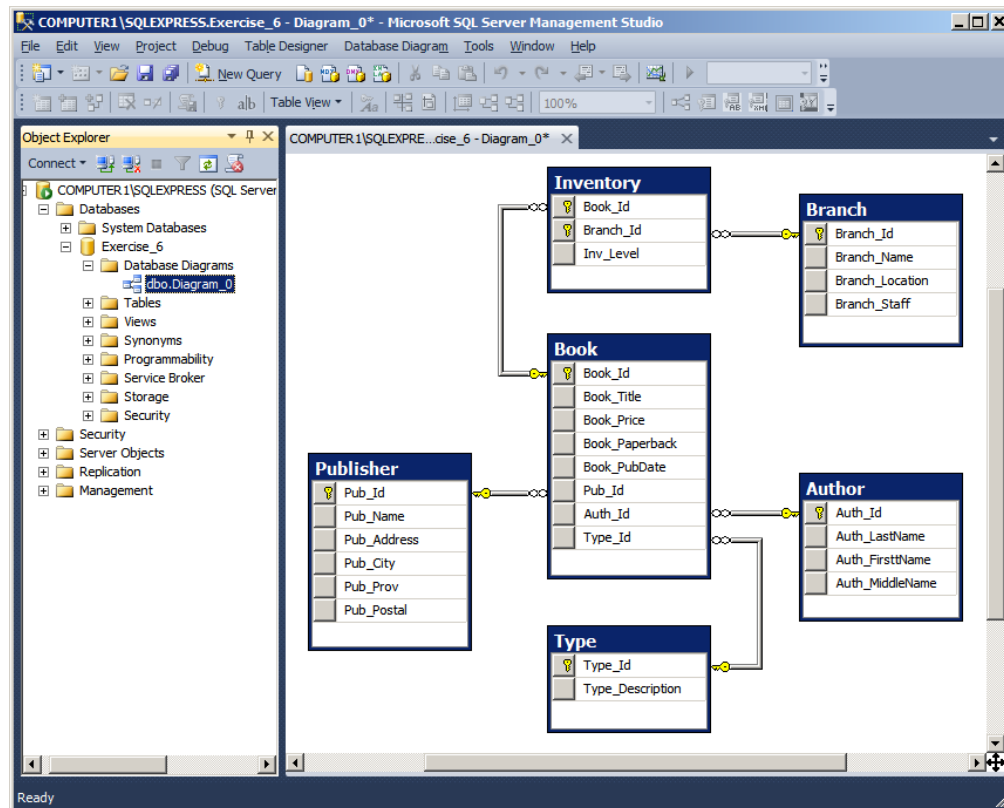
- Publisher



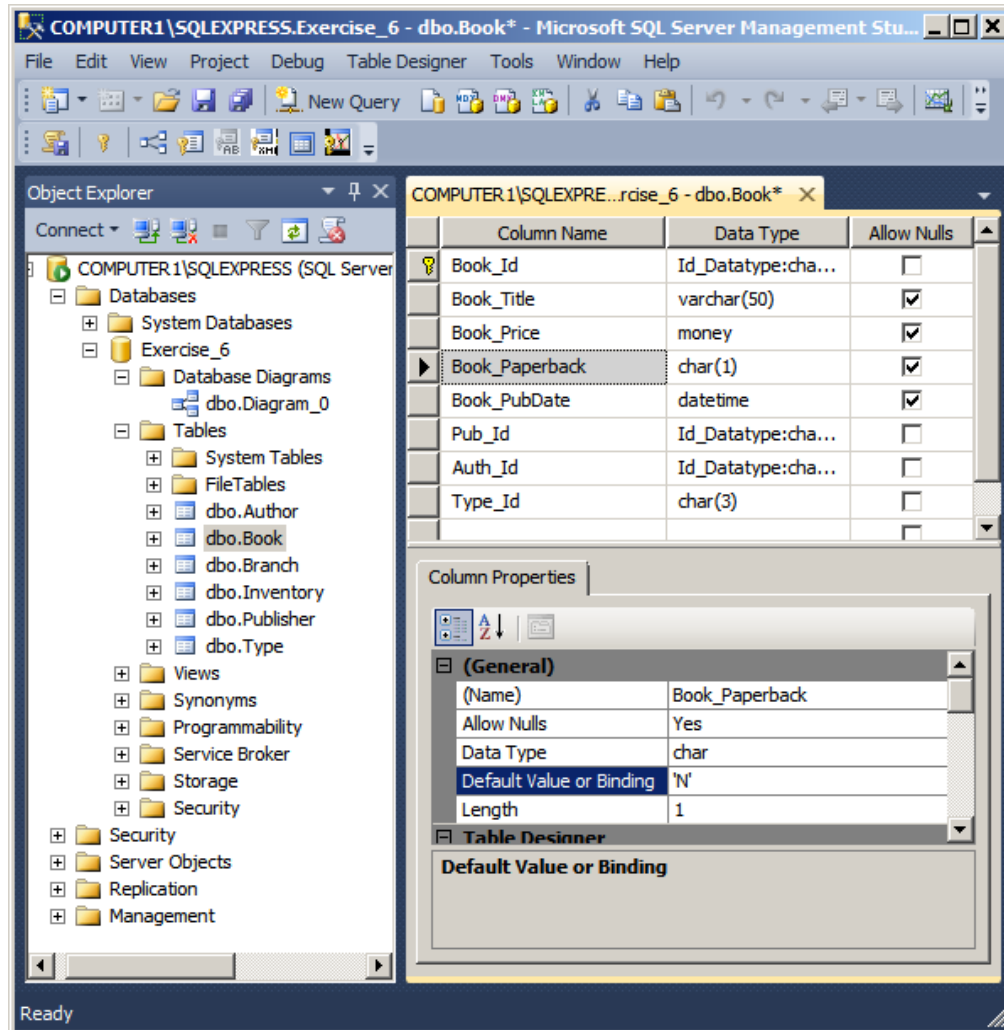
- Type



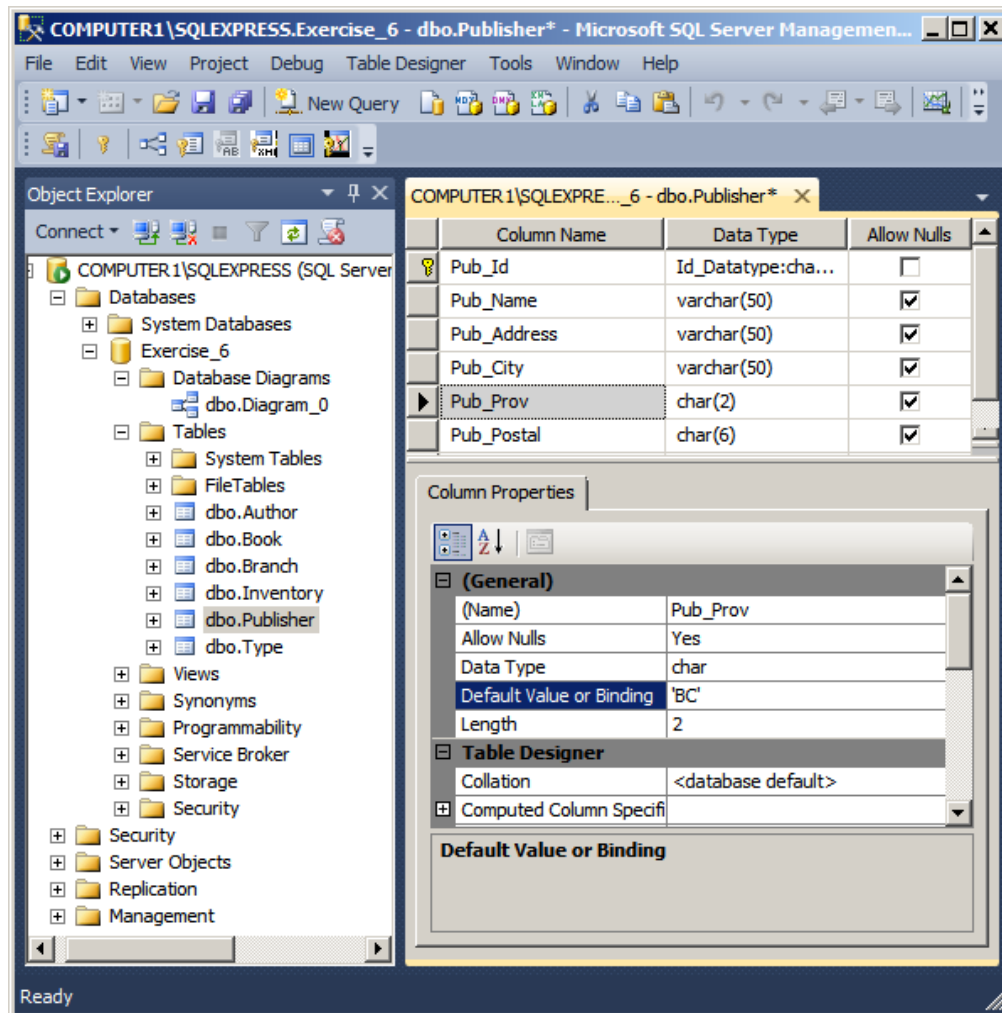
5. Add all the Primary Keys and Foreign Keys.



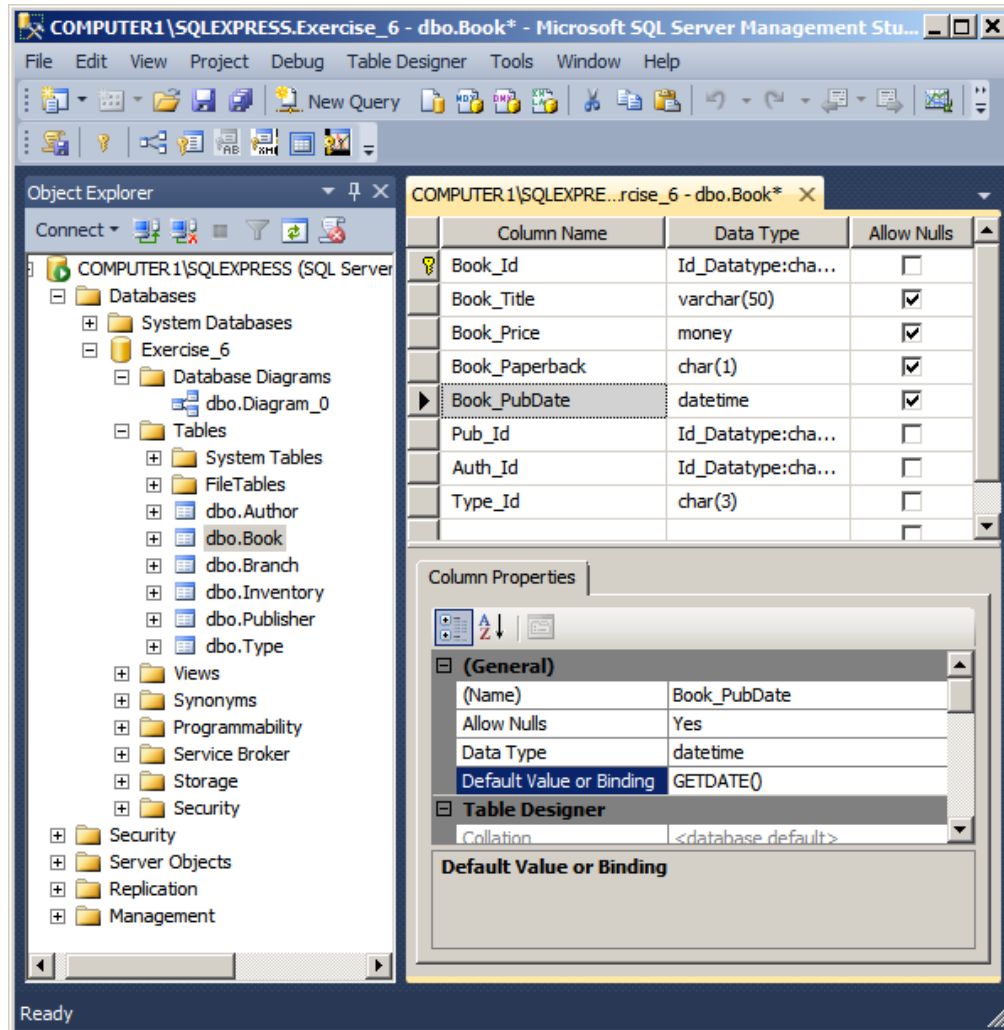
6. The default value for the **Book** table's **Paperback** column is 'N'.



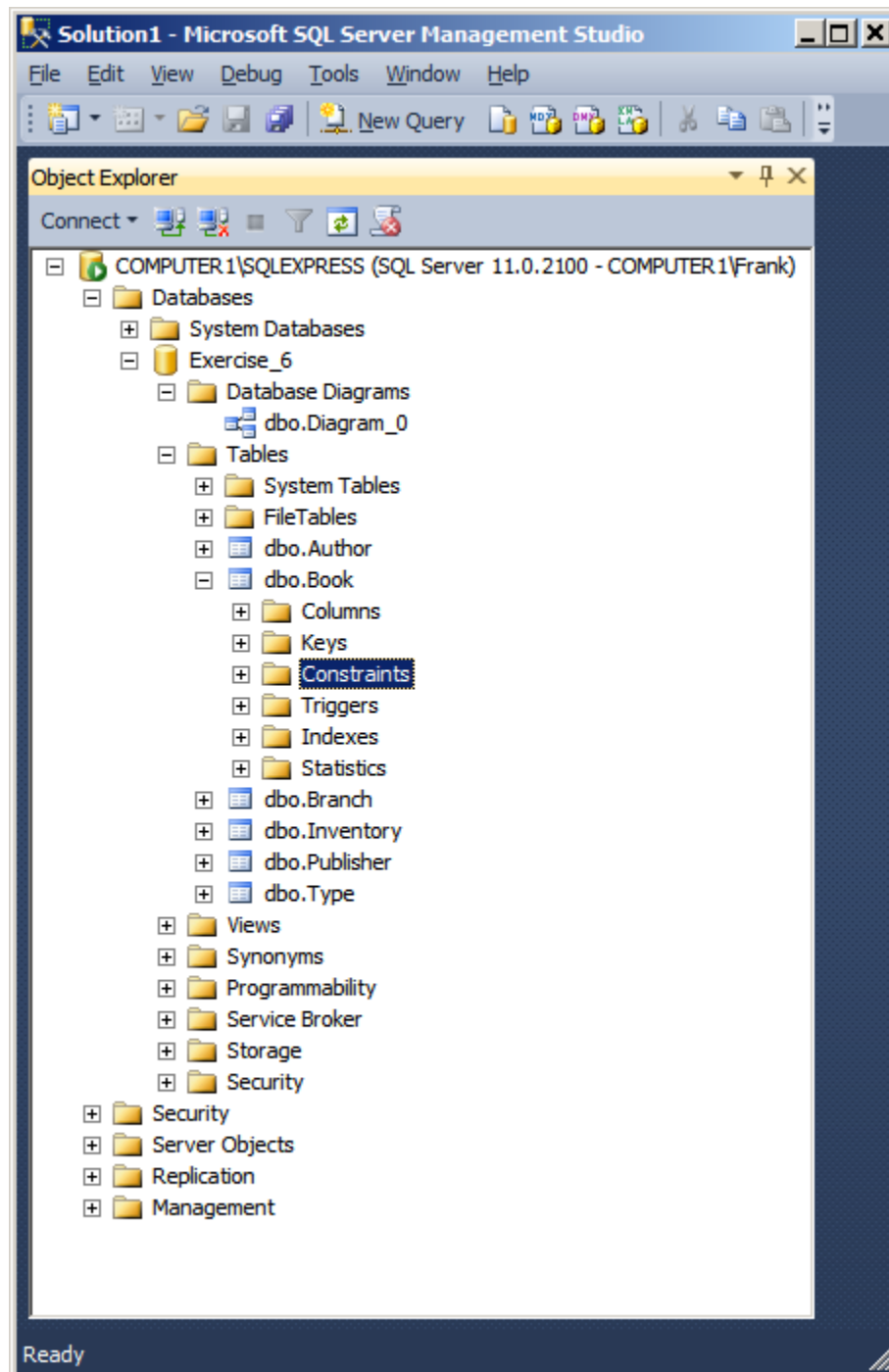
7. The default value for the **Publisher** table's **Prov** column is **'BC'**.



8. The default value for the **Book** table's **PubDate** column is today **GETDATE()**.



9. Add a check constraint to the **Book** table's **Type_Id** column to ensure the upper case letters A through Z are the only acceptable values for each of the characters in the column.



Check Constraints [?] [X]

Selected Check Constraint:

CK_Book*

Editing properties for new check constraint. The 'Expression' property needs to be filled in before the new check constraint will be accepted.

(General)	
Expression	Type_Id LIKE '[A-Z][A-Z][A-Z]'
Identity	
(Name)	CK_Book
Description	
Table Designer	
Check Existing Data On Crea	Yes
Enforce For INSERTs And UP	Yes
Enforce For Replication	Yes

Add Delete Close

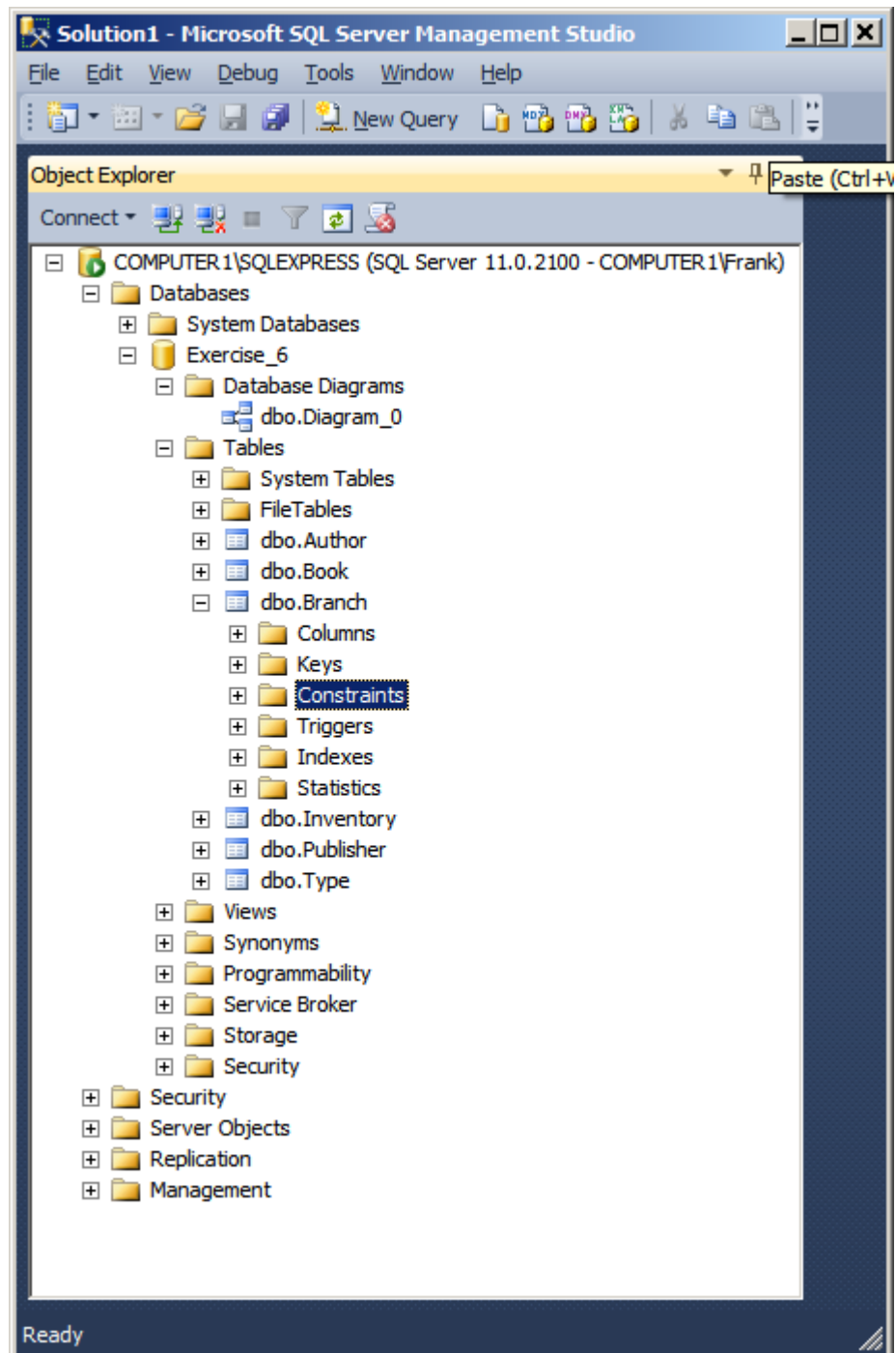
Check Constraint Expression [?] [X]

Expression:

Type_Id LIKE '[A-Z][A-Z][A-Z]'

OK Cancel

10. Add a check constraint to the **Branch** table's **Id** column for values 1 through 99999.



Check Constraints [?] [X]

Selected Check Constraint:

CK_Branch*

Editing properties for new check constraint. The 'Expression' property needs to be filled in before the new check constraint will be accepted.

(General)	
Expression	Branch_Id BETWEEN 1 AND 99999
Identity	
(Name)	CK_Branch
Description	
Table Designer	
Check Existing Data On Crea	Yes
Enforce For INSERTs And UPI	Yes
Enforce For Replication	Yes

Add Delete Close

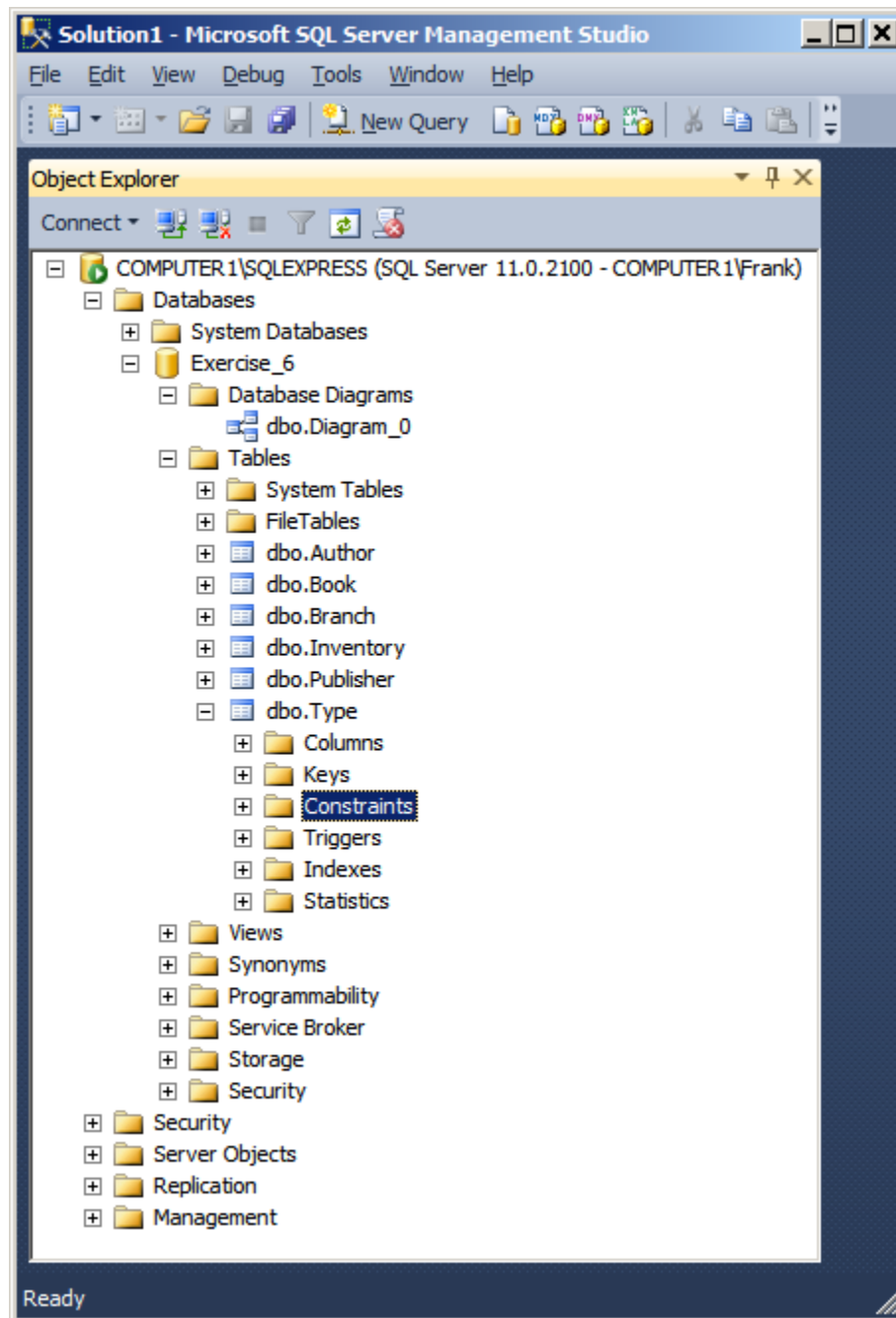
Check Constraint Expression [?] [X]

Expression:

Branch_Id BETWEEN 1 AND 99999

OK Cancel

11. Add a check constraint to the **Type** table's **Description** column for the values 'FIC', 'NON', 'REF'.



Check Constraints [?] [X]

Selected Check Constraint:

CK_Type*

Editing properties for new check constraint. The 'Expression' property needs to be filled in before the new check constraint will be accepted.

(General)	
Expression	Type_Description IN ('FIC','NON','REF')
Identity	
(Name)	CK_Type
Description	
Table Designer	
Check Existing Data On Crea	Yes
Enforce For INSERTs And UPI	Yes
Enforce For Replication	Yes

Add Delete Close

Check Constraint Expression [?] [X]

Expression:

Type_Description IN ('FIC','NON','REF')

OK Cancel

Submit the PDF image of the ERD created in step 4 to the D2L Ex6 drop box.

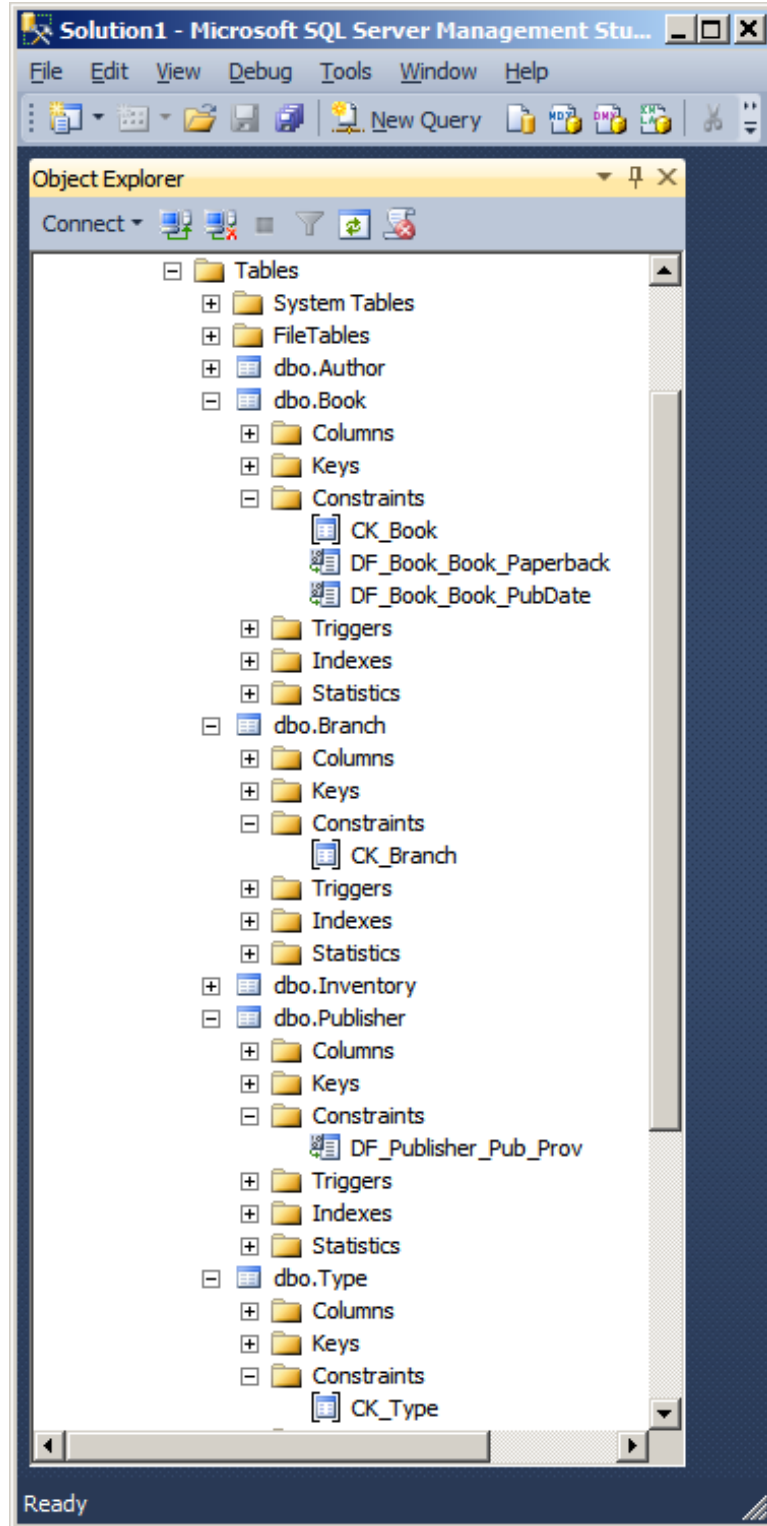


Table Layout

Author

Column Name	Data Type	Length		Key	Null
Auth_Id	char	5	User-defined Data Type	PK	No
Auth_LastName	varchar	50			
Auth_FirstName	varchar	50			
Auth_MiddleName	varchar	50			

Book

Column Name	Data Type	Length		Key	Null
Book_Id	char	5	User-defined Data Type	PK	No
Book_Title	varchar	50			
Book_Price	money				
Book_Paperback	char	1			
Book_PubDate	datetime				
Pub_Id	char	5	User-defined Data Type	FK	No
Auth_Id	char	5	User-defined Data Type	FK	No
Type_Id	char	3		FK	No

Branch

Column Name	Data Type	Length		Key	Null
Branch_Id	char	5	User-defined Data Type	PK	No
Branch_Name	varchar	50			
Branch_Location	varchar	50			
Branch_Staff	int				

Inventory

Column Name	Data Type	Length		Key	Null
Book_Id	char	5	User-defined Data Type	PK1 FK	No
Branch_Id	char	5	User-defined Data Type	PK2 FK	No
Inv_Level	int				

Publisher

Column Name	Data Type	Length		Key	Null
Pub_Id	char	5	User-defined Data Type	PK	No
Pub_Name	varchar	50			
Pub_Address	varchar	50			
Pub_City	varchar	50			
Pub_Prov	char	2			
Pub_Postal	char	6			

Type

Column Name	Data Type	Length		Key	Null
Type_Id	char	3		PK	No
Type_Description	varchar	50			