

به نام خدا

مراحل ساخت پایگاه داده ، جداول و ارتباط بین آن ها

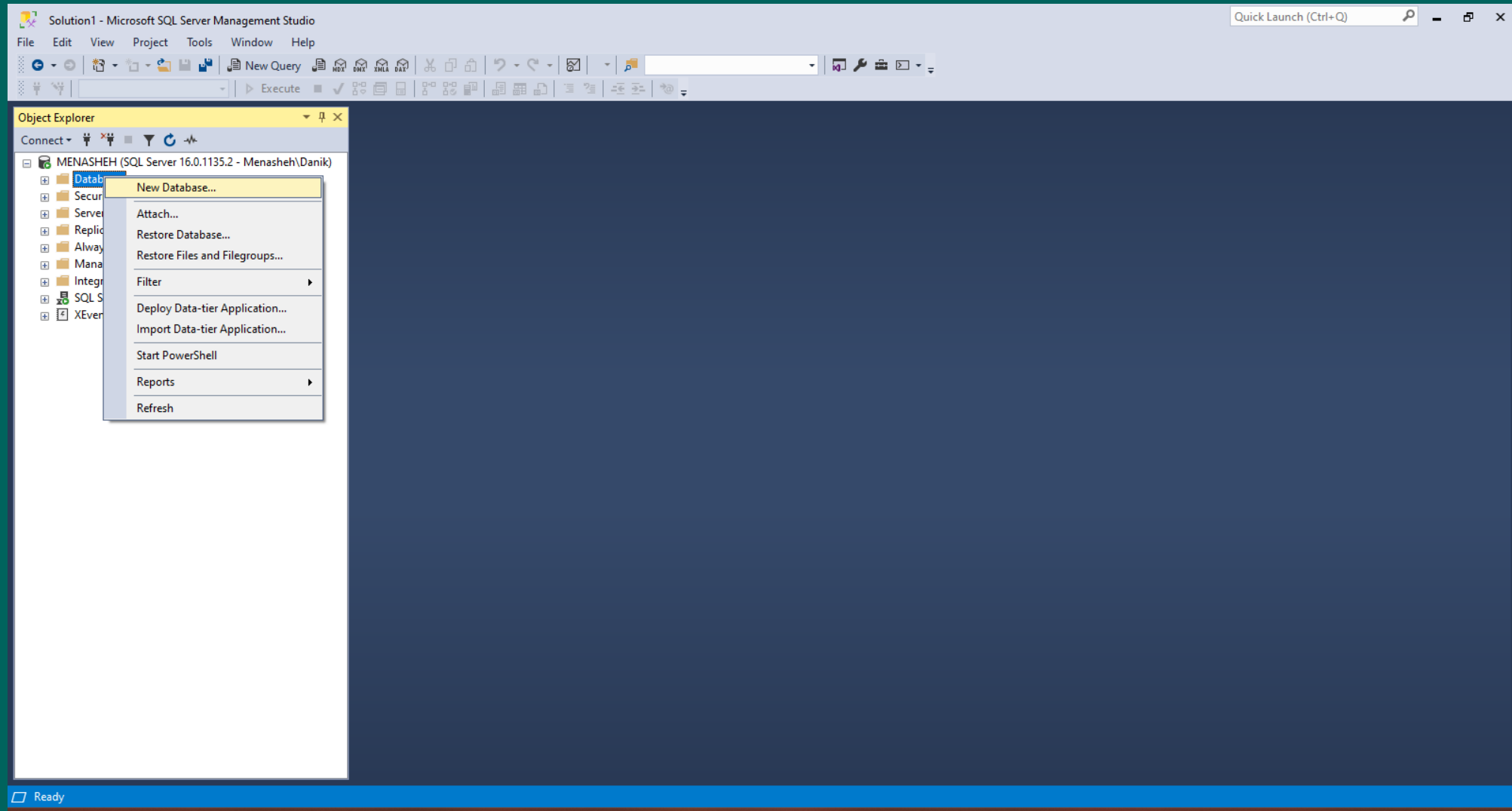
دانش خداداد زاده

401 433 597

تکلیف 2 پایگاه داده

ساخت پایگاه داده :

در پنجره Explorer Object بر روی Databases راست کلیک می‌کنیم و گزینه Database New را انتخاب می‌کنیم



# نام گذاری پایگاه داده

Solution1 - Microsoft SQL Server Management Studio

File Edit View Project Tools Window Help

Quick Launch (Ctrl+Q)

Object Explorer

Connect

MENASHEH (SQL Server 16.0.1135.2 - Menasheh\Danik)

- Databases
- Security
- Server Objects
- Replication
- Always On High Availability
- Management
- Integration Services Catalogs
- SQL Server Agent
- XEvent Profiler

New Database

Select a page

- General
- Options
- Filegroups

Script Help

Database name: MailDB

Owner: <default>

☒ Use full-text indexing

Database files:

Logical Name	File Type	Filegroup	Initial Size (MB)	Autogrowth / Maxsize	Path
MailDB	ROWS...	PRIMARY	8	By 64 MB, Unlimited	C:\P
MailDB_log	LOG	Not Applicable	8	By 64 MB, Unlimited	C:\P

Connection

Server: Menasheh

Connection: MENASHEH\Danik

[View connection properties](#)

Progress

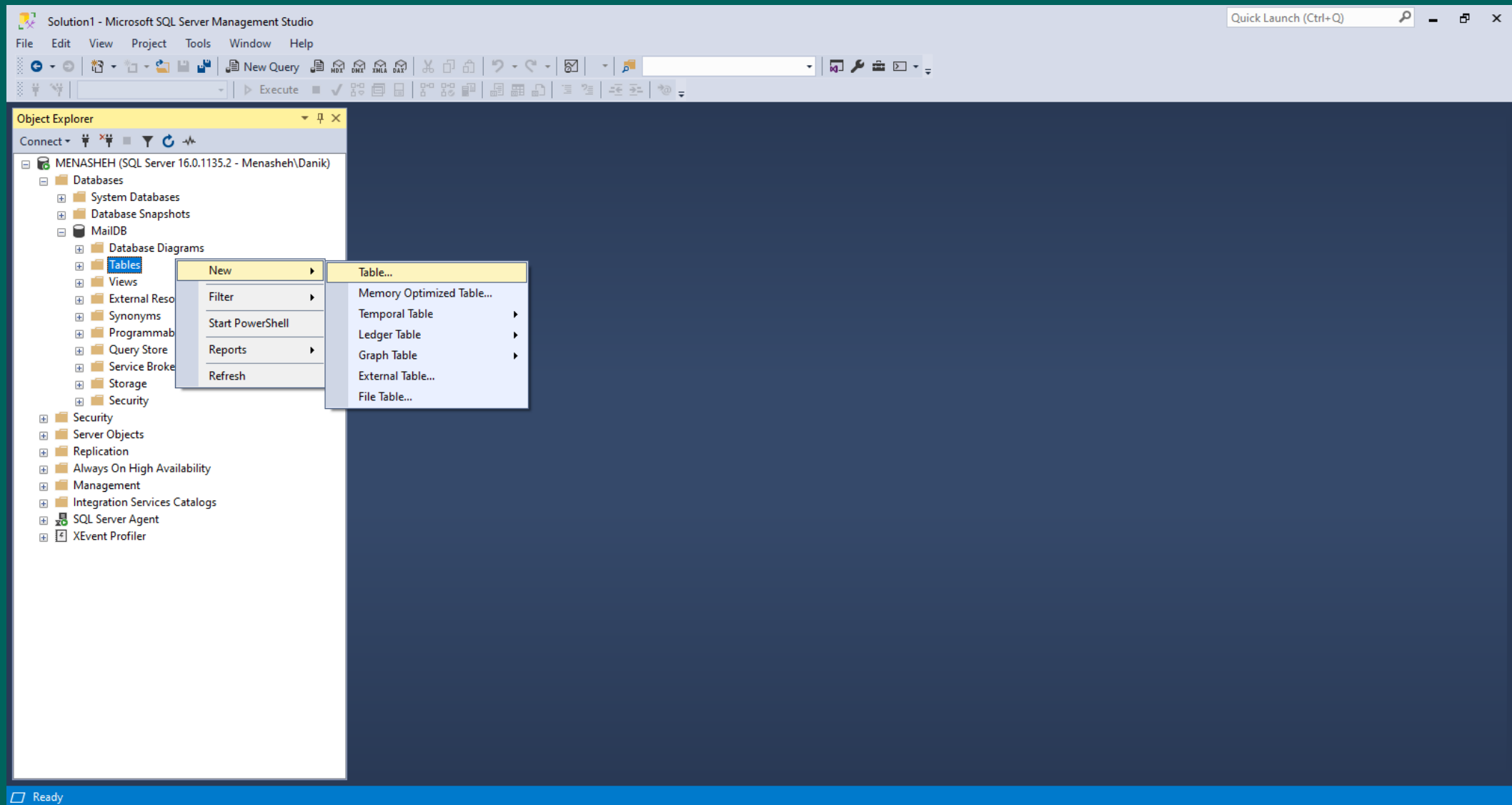
Ready

Add Remove

OK Cancel

Ready

# ساخت جداول در پایگاه داده



# ساخت جدول User و مشخص کردن Data type آن ها

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The left pane shows the 'Object Explorer' with the 'MailDB' database selected. The right pane shows the 'Table Designer' for the 'dbo.User' table. The table structure is as follows:

Column Name	Data Type	Allow Nulls
UserID	int	<input checked="" type="checkbox"/>
Password	varchar(60)	<input checked="" type="checkbox"/>
FirstName	varchar(50)	<input checked="" type="checkbox"/>
LastName	varchar(50)	<input checked="" type="checkbox"/>

The 'LastName' column is selected, and its properties are shown in the 'Column Properties' pane below:

Property	Value
(Name)	LastName
Allow Nulls	Yes
Data Type	varchar
Default Value or Binding	
Length	50

At the bottom of the window, a status bar indicates 'Item(s) Saved'.

# نام گذاری جداول

Microsoft SQL Server Management Studio

File Edit View Project Table Designer Tools Window Help

Quick Launch (Ctrl+Q)

Object Explorer

Connect

MENASHEH (SQL Server 16.0.1135.2 - Menasheh\Danik)

- Databases
  - System Databases
  - Database Snapshots
  - MailDB
    - Database Diagrams
    - Tables
    - Views
    - External Resources
    - Synonyms
    - Programmability
    - Query Store
    - Service Broker
    - Storage
    - Security
  - Security
  - Server Objects
  - Replication
  - Always On High Availability
  - Management
  - Integration Services Catalogs
  - SQL Server Agent
  - XEvent Profiler

Menasheh.MailDB - dbo.Table\_1\*

Column Name	Data Type	Allow Nulls
UserID	int	<input checked="" type="checkbox"/>
Password	varchar(60)	<input checked="" type="checkbox"/>
FirstName	varchar(50)	<input checked="" type="checkbox"/>
LastName	varchar(50)	<input checked="" type="checkbox"/>

Choose Name

Enter a name for the table:

User

OK Cancel

Column Properties

(General)

(Name)	LastName
Allow Nulls	Yes
Data Type	varchar
Default Value or Binding	
Length	50

(General)

# تعریف کردن کلید اصلی جداول

Microsoft SQL Server Management Studio interface showing the process of defining a primary key for a table.

**Object Explorer:** Shows the database structure for MENASHEH (SQL Server 16.0.1135.2 - Menasheh\Danik). The database structure includes System Databases, Database Snapshots, MailDB, Database Diagrams, Tables, Views, External Resources, Synonyms, Programmability, Query Store, Service Broker, Storage, Security, Server Objects, Replication, Always On High Availability Management, Integration Services Catalogs, SQL Server Agent, and XEvent Profiler.

**Table Designer:** Shows the structure of the table **Menasheh.MailDB - dbo.Table\_1\***. The columns are:

Column Name	Data Type	Allow Nulls
UserID	int	<input type="checkbox"/>
Password	varchar(60)	<input type="checkbox"/>
FirstName	varchar(50)	<input type="checkbox"/>
LastName	varchar(50)	<input type="checkbox"/>

A context menu is open over the **UserID** column, showing options:

- Set Primary Key
- Insert Column
- Delete Column
- Relationships...
- Indexes/Keys...
- Fulltext Index...
- XML Indexes...
- Check Constraints...
- Spatial Indexes...
- Generate Change Script...
- Properties (Alt+Enter)

**Column Properties:** Shows the properties for the **UserID** column:

Property	Value
(Name)	UserID
Allow Nulls	No
Data Type	int
Default Value or Binding	

**Table Designer (General):** Shows the general properties of the table.

Ready

# ساخت جدول Message و مشخص کردن Data type آن ها

Microsoft SQL Server Management Studio - Menasheh.MailDB - dbo.Table\_1Menasheh.MailDB - dbo.Message\*

File Edit View Project Table Designer Tools Window Help

Quick Launch (Ctrl+Q)

Object Explorer

Connect

MENASHEH (SQL Server 16.0.1135.2 - Menasheh\Danik)

- Databases
  - System Databases
  - Database Snapshots
  - MailDB
    - Database Diagrams
    - Tables
    - Views
    - External Resources
    - Synonyms
    - Programmability
    - Query Store
    - Service Broker
    - Storage
    - Security
- Security
- Server Objects
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- XEvent Profiler

Table Designer: Menasheh.MailDB - dbo.Message\*

Column Name	Data Type	Allow Nulls
MID	int	<input type="checkbox"/>
Subject	text	<input checked="" type="checkbox"/>
Body	text	<input checked="" type="checkbox"/>
Sender	int	<input type="checkbox"/>
Receiver	int	<input type="checkbox"/>
Date	date	<input type="checkbox"/>
Time	time(7)	<input type="checkbox"/>
DelTag	bit	<input type="checkbox"/>

Column Properties

(General)

(Name)	MID
Allow Nulls	No
Data Type	int
Default Value or Binding	

Table Designer

(General)

Ready



# ساخت جدول Attachment و مشخص کردن Data type آن ها

Microsoft SQL Server Management Studio - Menasheh.MailDB - dbo.Table\_1\*

File Edit View Project Table Designer Tools Window Help

Quick Launch (Ctrl+Q)

Object Explorer

Connect

MENASHEH (SQL Server 16.0.1135.2 - Menasheh\Danik)

- Databases
  - System Databases
  - Database Snapshots
  - MailDB
    - Database Diagrams
    - Tables
    - Views
    - External Resources
    - Synonyms
    - Programmability
    - Query Store
    - Service Broker
    - Storage
    - Security
- Security
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- Integration Services Catalogs
- SQL Server Agent
- XEvent Profiler

Menasheh.MailDB - dbo.Table\_1\* | Menasheh.MailDB - ...ilDB - dbo.Message\* | Menasheh.MailDB - ...MailDB - dbo.User\*

Column Name	Data Type	Allow Nulls
AID	int	<input type="checkbox"/>
FileName	nvarchar(255)	<input checked="" type="checkbox"/>
[File]	varbinary(MAX)	<input checked="" type="checkbox"/>
MID	int	<input type="checkbox"/>
		<input type="checkbox"/>

Column Properties

(General)

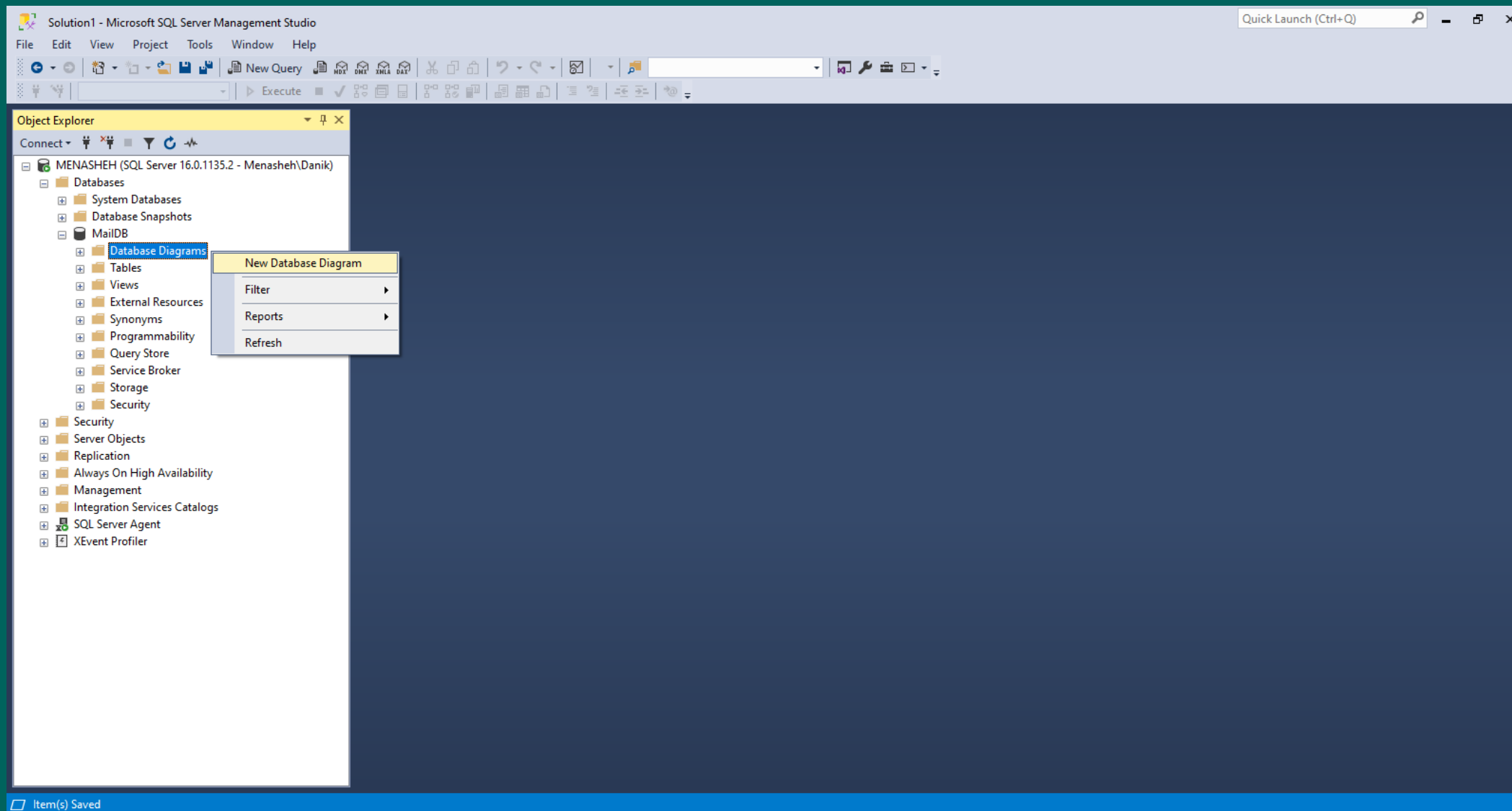
(Name)	AID
Allow Nulls	No
Data Type	int
Default Value or Binding	

Table Designer

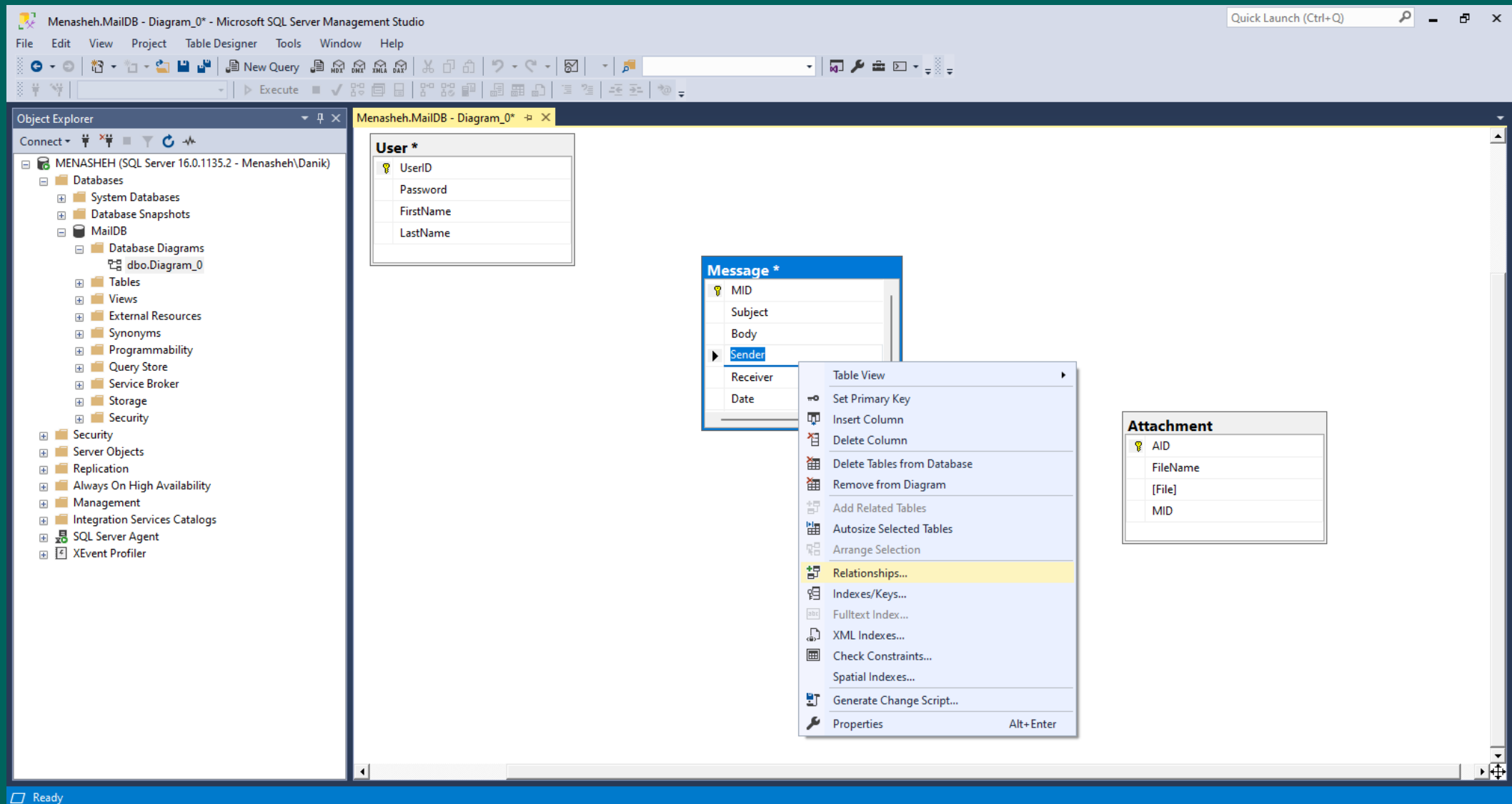
(General)

Ready

# ساخت دیاگرام و تعریف روابط



# تعريف روابط



## تعريف روابط بين جداول

Foreign Key Relationships

?

×

Selected Relationship:

FK\_User\_User\*

Editing properties for new relationship. The 'Tables And Columns Specification' property needs to be filled in before the new relationship will be accepted.

▼ (General)

Check Existing Data On Create Yes

> Tables And Columns Specification ...

▼ Database Designer

Enforce For Replication Yes

Enforce Foreign Key Constraints Yes

> INSERT And UPDATE Specifications

▼ Identity

(Name) FK\_User\_User

Description

Add

Delete

Close

# تعريف روابط بين جداول

The screenshot displays the Microsoft SQL Server Management Studio interface. The 'Object Explorer' on the left shows the database structure for 'MENASHEH (SQL Server 16.0.1135.2 - Menasheh\Danik)'. The 'Tables and Columns' dialog box is open, showing the relationship between the 'User' table (Primary key table) and the 'Message' table (Foreign key table). The 'Relationship name' is 'FK\_Message\_User1'. The 'Primary key table' is 'User' with the 'UserID' column selected. The 'Foreign key table' is 'Message' with the 'Sender' column selected. The 'Attachment' table is also visible in the background.

**Tables and Columns**

Relationship name: FK\_Message\_User1

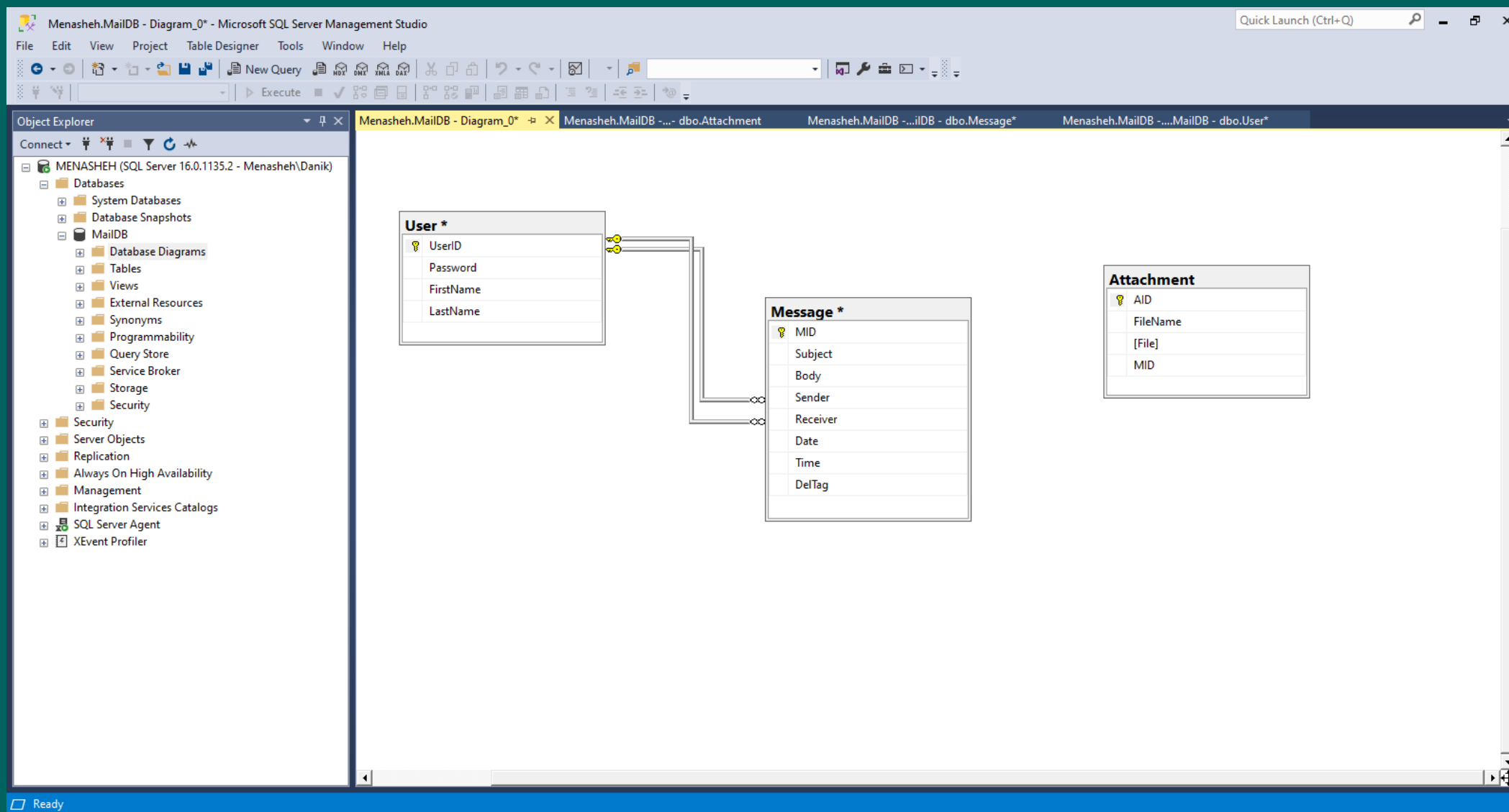
Primary key table: User  
Foreign key table: Message

UserID Sender

**Attachment**

AID  
FileName  
[File]  
MID

# رابطه بین جدول User و Message : ارتباط UserID به Reciever و Sender



# رابطه بین جدول Message و Attachment : ارتباط MID به MID

