

ASP.NET 4.5 Assignment Guide

❖ **Introduction** : Developing a ASP.NET application using Model Binder & Model Validation

❖ **Requirement** :

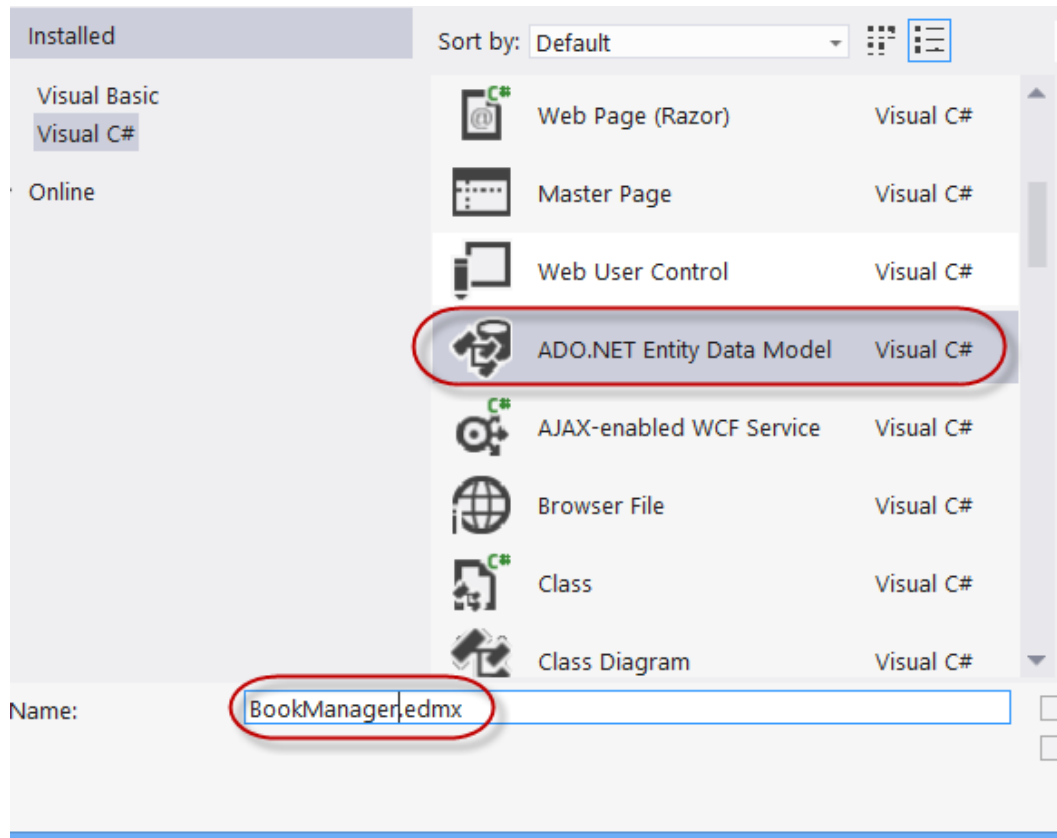
- Visual Studio .Net 2012 (.Net Framework 4.5)
- In SQL Server 2008 / 2012 , create a database named Manager and create a table named Books as the following :

T400\SQL2K8.Manager - dbo.Books			
	Column Name	Data Type	Allow Nulls
🔑	BookID	int	<input type="checkbox"/>
	BookTitle	varchar(50)	<input type="checkbox"/>
▶	BookPrice	float	<input type="checkbox"/>
			<input type="checkbox"/>

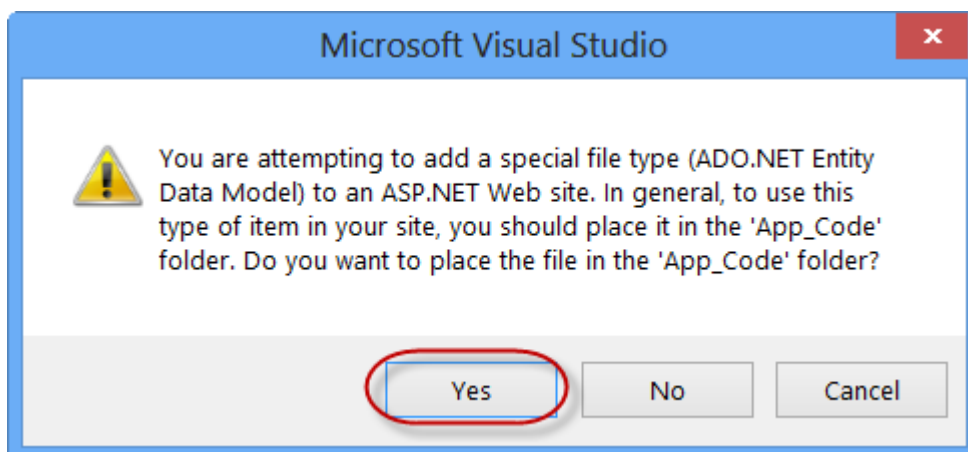
➤ Step 1 : Create ASP.NET Application

1.1 From menu File|New Web Site, In Project Type | Visual C# & Templates | ASP.NET Empty Web Site and named *MyWebApp* , add App_Code folder.

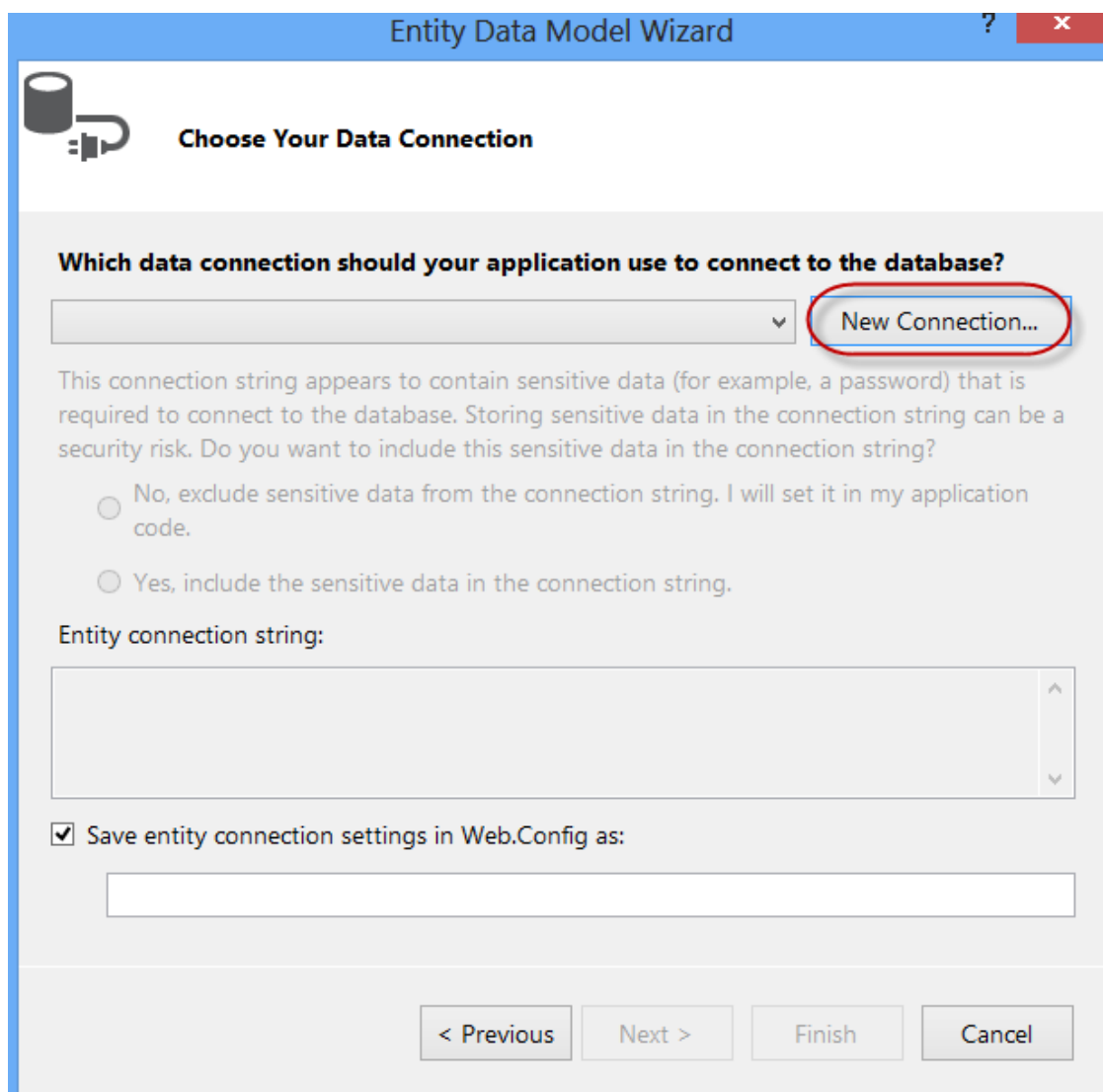
1.2 Right-click on **MyWebApp** | **Add New Item** | **ADO.NET Entity Data Model** , named **BookManager.edmx** as the below figure .



- “**Microsoft Visual Studio**” dialog showed , click **Yes** to add model into App_Code .



- In “**Entity Data Model Wizard**” dialog , select “**Generate from database**” , click **Next** | **New Connection** , and configure as the below figures :



Connection Properties

Enter information to connect to the selected data source or click "Change" to choose a different data source and/or provider.

Data source:
Microsoft SQL Server (SqlClient) Change...

Server name:
.\SQL2K8 Refresh

Log on to the server

☐ Use Windows Authentication

☒ Use SQL Server Authentication

User name: sa

Password: ●●●

☐ Save my password

Connect to a database

☒ Select or enter a database name:
Manager

☐ Attach a database file:
Browse...

Logical name:

Advanced...

Test Connection OK Cancel

Entity Data Model Wizard

Choose Your Data Connection

Which data connection should your application use to connect to the database?

t400\sql2k8.Manager.dbo New Connection...

This connection string appears to contain sensitive data (for example, a password) that is required to connect to the database. Storing sensitive data in the connection string can be a security risk. Do you want to include this sensitive data in the connection string?

☒ No, exclude sensitive data from the connection string. I will set it in my application code.

☐ Yes, include the sensitive data in the connection string.

Entity connection string:

```
metadata=res://*/App_Code.BookManager.csdl|res://*/App_Code.BookManager.ssdl|
res://*/App_Code.BookManager.msl;provider=System.Data.SqlClient;provider connection
string="data source=.\SQL2K8;initial catalog=Manager;user
id=sa;MultipleActiveResultSets=True;App=EntityFramework"
```

☒ Save entity connection settings in Web.Config as:

ManagerEntities

< Previous **Next >** Finish Cancel

Entity Data Model Wizard

Choose Your Database Objects and Settings

Which database objects do you want to include in your model?

☒ Tables

☒ dbo

☒ Books

☐ Views

☐ Stored Procedures and Functions

☒ Pluralize or singularize generated object names

☒ Include foreign key columns in the model

☐ Import selected stored procedures and functions into the entity model

Model Namespace:

ManagerModel

< Previous Next > **Finish** Cancel

➤ **Step 2 :Create a ASP.NET page**

2.1 Add new a ASP.NET named MaintainBooks.aspx with user interface as the below table:

The screenshot shows a web page titled 'MaintainBooks.aspx'. It contains a validation summary section with the text 'Please check the following errors:' and two bullet points: 'Error message 1.' and 'Error message 2.'. Below this are three text boxes labeled 'BookID', 'BookTitle', and 'BookPrice', each with a 'Databound' value. There is an 'Insert' button. At the bottom, there is a table with 4 columns: 'Column0', 'Column1', and 'Column2'. Each row has 'Edit' and 'Delete' links followed by 'abc' in each column.

	Column0	Column1	Column2
Edit Delete	abc	abc	abc
Edit Delete	abc	abc	abc
Edit Delete	abc	abc	abc
Edit Delete	abc	abc	abc
Edit Delete	abc	abc	abc

Control Type	Properties/ Event	Value
TextBox	ID	txtBookID
TextBox	ID	txtBookTitle
TextBox	ID	txtBookPrice
Validation Summary	ForeColor	Red
	HeaderText	Please check the following errors:
FormView	ID	fvProductDetail
	ItemType	Book
	DefaultMode	Insert
	InsertMethod	fvProductDetail_InsertBook
	Design for InsertItemTemplate	Reference to "HTML Code for FormView"
GridView	ID	gvBookList
	DataKeyNames	BookID
	AutoGenerateDeleteButton	True
	AutoGenerateEditButton	True
	SelectMethod	gvBookList_GetBooks
	UpdateMethod	gvBookList_UpdateBook
	DeleteMethod	gvBookList_DeleteBook

➤ HTML Code for FormView

```
<asp:FormView ID="fvProductDetail" runat="server" DefaultMode="Insert" ItemType="Book"
InsertMethod="fvProductDetail_InsertBook" >
    <InsertItemTemplate>
        <table>
            <tr>
                <td>BookID</td>
                <td> <asp:TextBox ID="txtBookID" runat="server"
                    Text='<%#BindItem.BookID %>' /> </td>
            </tr>
            <tr>
                <td>BookTitle</td>
                <td><asp:TextBox ID="txtBookTitle" runat="server"
                    Text='<%#BindItem.BookTitle %>' /> </td>
            </tr>
            <tr>
                <td>BookPrice</td>
                <td> <asp:TextBox ID="txtBookPrice" runat="server"
                    Text='<%#BindItem.BookPrice %>' /> </td>
            </tr>
            <tr>
                <td>
                    <asp:LinkButton ID="lkbInsert" runat="server"
                        CommandName="Insert" Text="Insert"/> </td>
                <td>
                </td>
            </tr>
        </table>
    </InsertItemTemplate>
</asp:FormView>
```

2.2 Right-click on **App_Code** | **Add** | **Class** , named **Book.cs** and writes code as the following:

```
using System.ComponentModel.DataAnnotations;
```

```
[MetadataType(typeof(BookMetadata))]
public partial class Book
{
}
public class BookMetadata{
    [Key]
    public int BookID { get; set; }

    [StringLength(50, MinimumLength = 5, ErrorMessage = "BookTitle from 5 to 50 character.")]
    [Required(ErrorMessage = "BookTitle is required.")]
    public string BookTitle { get; set; }

    [Range(0, 100, ErrorMessage = "BookPrice value from 0 to 100.")]
    [Required(ErrorMessage = "BookPrice is required.")]
    public double BookPrice { get; set; }
}
```

2.3 Double –click on the MaintainBooks.aspx page and writes code for MaintainBooks.aspx.cs file as the following :

```
public partial class MaintainProducts : System.Web.UI.Page {
    ManagerEntities bookData = new ManagerEntities();
    protected void Page_Load(object sender, EventArgs e) {
        //nothing
    }
    public IQueryable gvBookList_GetBooks(){
        return bookData.Books.AsQueryable();
    }
    public void gvBookList_UpdateBook(Book b){
        if (ModelState.IsValid){
            bookData.Entry(b).State = System.Data.EntityState.Modified;
            bookData.SaveChanges();
        }
    }
    public void gvBookList_DeleteBook(int BookID){
        Book b = bookData.Books.Find(BookID);
        bookData.Books.Remove(b);
        bookData.SaveChanges();
    }
    public void fvProductDetail_InsertBook(Book b){
        if (ModelState.IsValid){
            try {
                bookData.Books.Add(b);
                bookData.SaveChanges();
                gvBookList.DataBind();
            }
            catch{
                ModelState.AddModelError("Insert Book", "Can not insert this book.");
            }
        }
    }
}
```

➤ **Step 3 : Run MyWebApp application**

On the **MyWebApp** project , select MaintainBooks.aspx , right-click | View in Browser , and test functions as the below figure .

Please check the following errors:

- The BookID field is required.
- BookTitle is required.
- BookPrice is required.

BookID

BookTitle

BookPrice

[Insert](#)

	BookID	BookTitle	BookPrice
Edit Delete	1	IOS 6.7	22
Edit Delete	2	Java 1	15
Edit Delete	3	C#	13
Edit Delete	4	PHP Pro	12

Please check the following errors:

- The value 'a' is not valid for BookID.
- BookTitle from 5 to 50 character.
- The value 'abc' is not valid for BookPrice.

BookID

BookTitle

BookPrice

[Insert](#)

	BookID	BookTitle	BookPrice
Edit Delete	1	IOS 6.7	22
Edit Delete	2	Java 1	15
Edit Delete	3	C#	13
Edit Delete	4	PHP Pro	12

Please check the following errors:

- BookPrice value from 0 to 100.

BookID

BookTitle

BookPrice

[Insert](#)

	BookID	BookTitle	BookPrice
Edit Delete	1	IOS 6.7	22
Edit Delete	2	Java 1	15
Edit Delete	3	C#	13
Edit Delete	4	PHP Pro	12

Please check the following errors:

- Can not insert this book.

BookID

BookTitle

BookPrice

[Insert](#)

	BookID	BookTitle	BookPrice
Edit Delete	1	IOS 6.7	22
Edit Delete	2	Java 1	15
Edit Delete	3	C#	13
Edit Delete	4	PHP Pro	12