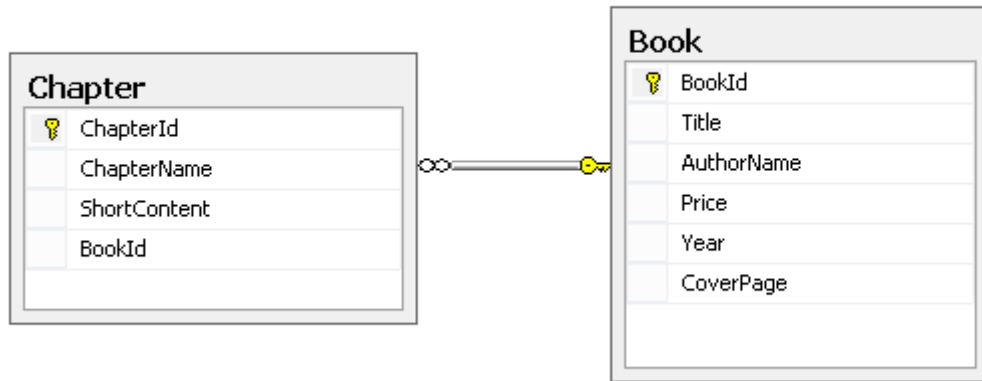


## Lab 5: Tạo ứng dụng quản lý sách - kết nối cơ sở dữ liệu

- ✚ Mục tiêu
  - Kết nối cơ sở dữ liệu thông qua ADO.NET Entity Data Model
  - Hiểu về cơ chế Map database của MVC
- ✓ Tạo Cơ sở dữ liệu như hình dưới

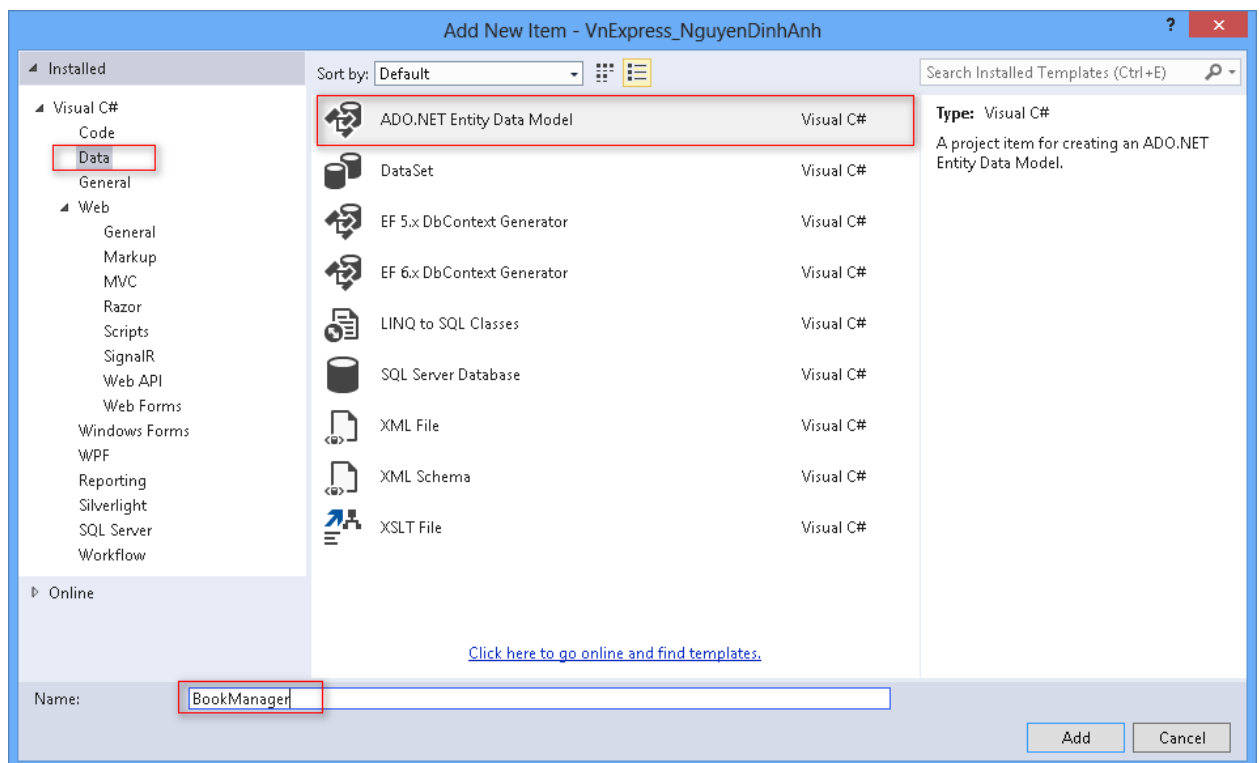


**Mô tả:** CSDL bao gồm **Book** và **Chapter**, một cuốn sách (book) thì có nhiều chapter (sinh viên tự nhập dữ liệu và thiết kế CSDL sao cho phù hợp)

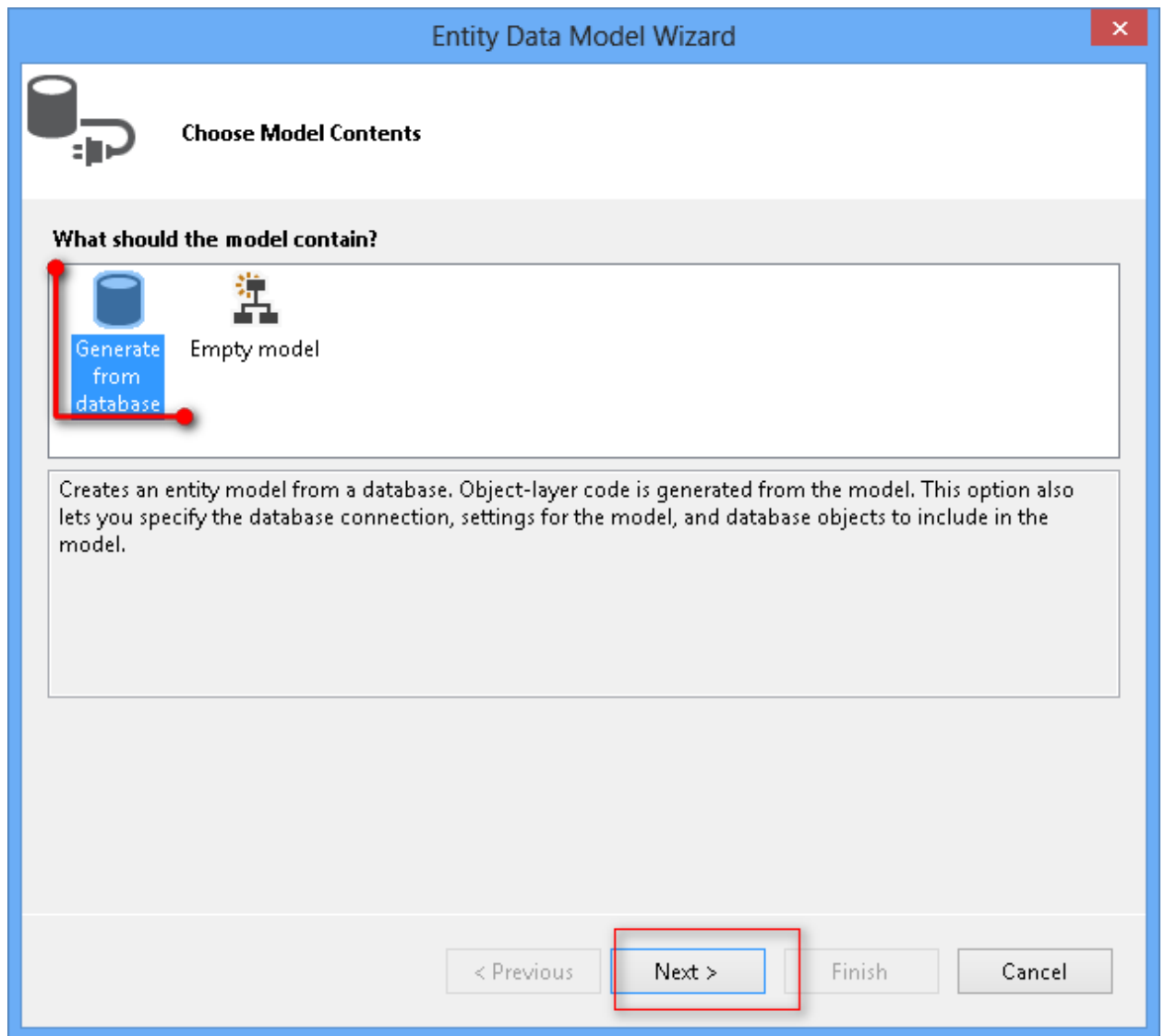
- ✚ **Tạo một project mới → New Project**

Nhấn chuột phải vào **Project** → **Chọn Add New Item** → **Chọn Data** → **Chọn ADO.NET**

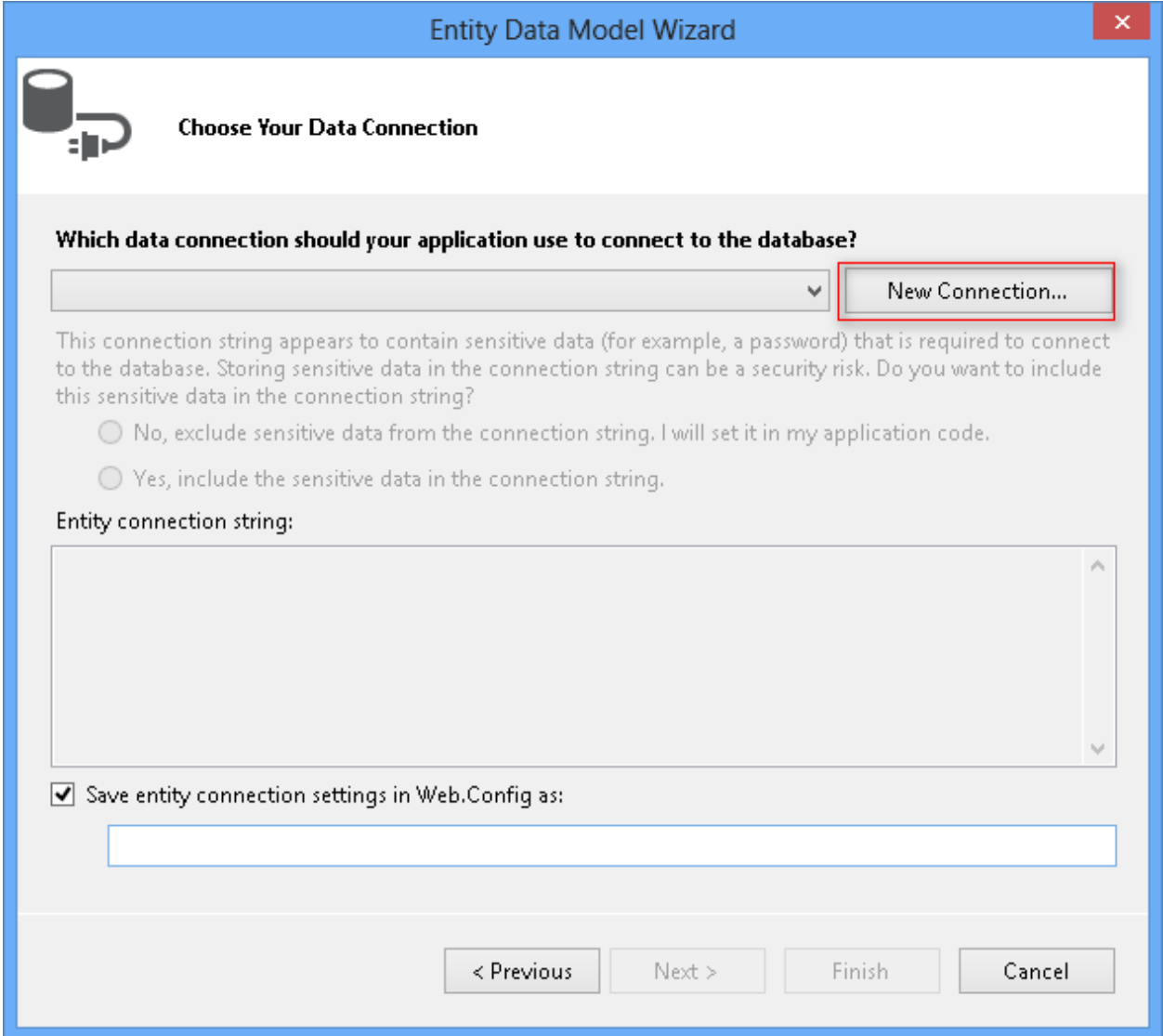
### Entity Data Model



Nhấn **Add**



Tiếp theo chọn theo hình



The image shows a Windows dialog box titled "Entity Data Model Wizard" with a close button (X) in the top right corner. The main heading is "Choose Your Data Connection" next to a database cylinder icon. Below this, a question asks: "Which data connection should your application use to connect to the database?". A dropdown menu is currently empty, and a "New Connection..." button is highlighted with a red rectangle. Below the question, a warning message states: "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?". Two radio buttons are provided: "No, exclude sensitive data from the connection string. I will set it in my application code." (which is selected) and "Yes, include the sensitive data in the connection string.". Below this is a text area labeled "Entity connection string:". At the bottom left, there is a checked checkbox labeled "Save entity connection settings in Web.Config as:" followed by an empty text box. At the bottom right, there are four buttons: "< Previous", "Next >", "Finish", and "Cancel".

Đăng nhập SQL Server

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:  
(local) 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:  
BookManager

☐ Attach a database file:

Browse...

Logical name:

Advanced...

Test Connection OK Cancel

Bảng kế tiếp

Entity Data Model Wizard

Choose Your Data Connection

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

dinhanh.BookManager.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://\*/BookManager.csdl|res://\*/BookManager.ssdl|
   
 res://\*/BookManager.msl;provider=System.Data.SqlClient;provider connection string="data source=
   
 (local);initial catalog=BookManager;persist security info=True;user
   
 id=sa;password=\*\*\*\*\*;MultipleActiveResultSets=True;App=EntityFramework"

☒ Save entity connection settings in Web.Config as:
 

BookManagerEntities

< Previous

Next >

Finish

Cancel

**Entity Data Model Wizard**

**Choose Your Database Objects and Settings**

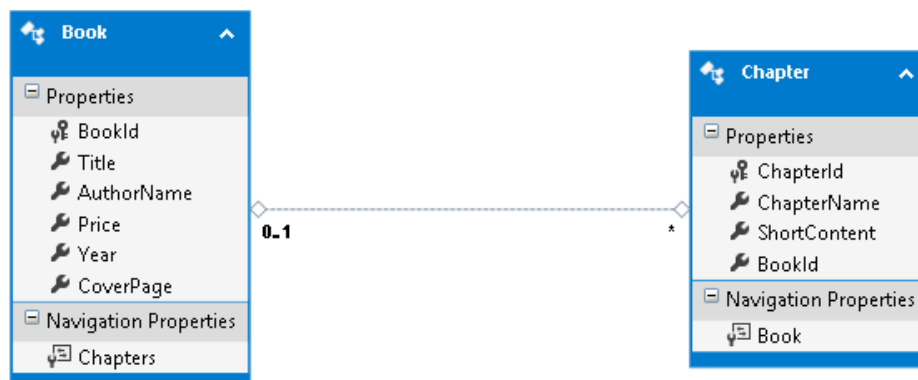
Which database objects do you want to include in your model?

- ☒ **Tables**
  - ☒ **dbo**
    - ☒ Book
    - ☒ Chapter
    - ☒ sysdiagrams
  - ☐ 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:  
BookManagerModel

## Sơ đồ Model



Tạo mới **Controller** là **BookController**, và thực hiện một số thao tác cơ bản để xử lý **CSDL**.

```
namespace VnExpress_NguyenDinhAnh.Controllers
```

```
{
    0 references
    public class BookController : Controller
```

```
{
    BookManagerEntities db = new BookManagerEntities();
```

```
    0 references
    public ActionResult getListBook()
```

```
{
    var listBook = from s in db.Books
                   select s;
    return View(listBook);
}
```

Khởi tạo kết nối thông qua EF

Xử lý thao tác Linq đơn giản

### Tạo View tương tự như các bài LAB trước

```
@model IEnumerable<VnExpress_NguyenDinhAnh.Book>

@{
    ViewBag.Title = "getListBook";
    Layout = "~/Views/Shared/_Layout.cshtml";
}

<h2>List Book From Database</h2>

<p>
    @Html.ActionLink("Create New", "Create")
</p>
<table class="table">
    <tr>
        <th>
            @Html.DisplayNameFor(model => model.Title)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.AuthorName)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.Price)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.Year)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.CoverPage)
        </th>
        <th></th>
    </tr>



    @foreach (var item in Model)
    {
        <tr>
            <td>
                @Html.DisplayFor(modelItem => item.Title)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.AuthorName)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Price)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Year)
            </td>
            <td>
                
            </td>
            <td>
                @Html.ActionLink("Edit", "Edit", new { id = item.BookId }) |
                @Html.ActionLink("Details", "Details", new { id = item.BookId }) |
                @Html.ActionLink("Delete", "Delete", new { id = item.BookId })
            </td>
        </tr>
    }
</table>
```



## Được kết quả trang danh sách **Book** lấy từ **CSDL**

### List Book From Database

[Create New](#)

Title	AuthorName	Price	Year	CoverPage	
Head First C#	Andrew Stellman & Jennifer Greene	100000	2012		<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Professional ASP NET MVC 5	Jon Galloway, Brad Wilson, K.Scott Allen, David Matson	150000	2015		<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Tiếp tục viết Hàm để xử lý cho nút lệnh Thêm mới **Book**, Chỉnh sửa **Book**, và xem chi tiết cuốn sách kèm theo các **thông tin chương sách**

```

0 references
public ActionResult CreateBook()
{
    return View();
}
[HttpPost, ActionName("CreateBook")]
0 references
public ActionResult CreateBook([Bind(Include = "Title, AuthorName, Price, Year, CoverPage")]Book book)
{
    try
    {
        if (ModelState.IsValid)
        {
            //Thêm mới sách
            db.Books.Add(book);
            db.SaveChanges();
        }
    }
    catch (RetryLimitExceededException /* dex */)
    {
        ModelState.AddModelError("", "Error Save Data");
    }
    //Trả về trang xem sách với danh sách Book mới
    var listBook = from s in db.Books
                    select s;
    return View("getListBook", listBook);
}
    
```

Giao diện trang thêm mới **Book**, sinh viên cần áp dụng cơ chế kiểm tra ràng buộc dữ liệu đã học ở bài **LAB** trước để khai báo các ràng buộc về dữ liệu cho các trường của **Book**

# CreateBook

## Book

---

Title

AuthorName

Price

Year

CoverPage

Create

[Back to List](#)

---

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### Viết Hàm xử lý nút lệnh **Detail**


```
// GET: Book/Details/5
0 references
public ActionResult Details(int? id)
{
    if (id == null)
    {
        return HttpNotFound();
    }
    var viewModel = db.Books.Include(s => s.Chapters).SingleOrDefault(s => s.BookId == id);

    if (viewModel == null)
    {
        return HttpNotFound();
    }
    return View(viewModel);
}
```

Bao gồm cả danh sách chapter

Kết quả trang **Detail**

## Details

Title	Head First C#123
AuthorName	Andrew Stellman & Jennifer Greene
Price	100000
Year	2012
CoverPage	

## List Chapter

- **Chapter 1: Start building with c#: Build something**  
With C#, you've got a great programming language and a valuable tool at
- **Chapter 2: It's all just code: Under the hood**  
NULLYou can get a lot of work done using the IDE. But there's only

### Hàm xử lý lệnh Edit (sinh viên tự tạo View như các bài LAB trước)

```
public ActionResult EditBook(int? id)
{
    if (id == null)
    {
        return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
    }
    Book book = db.Books.SingleOrDefault(s => s.BookId == id);
    return View(book);
}

[HttpPost, ActionName("EditBook")]
[ValidateAntiForgeryToken]
0 references
public ActionResult EditBook(int id)
{
    var bookUpdate = db.Books.Find(id);
    if (TryUpdateModel(bookUpdate, "",
        new string[] { "Title", "AuthorName", "Price", "Year", "CoverPage" }))
    {
        try
        {
            db.Entry(bookUpdate).State = EntityState.Modified;
            db.SaveChanges();
        }
        catch (RetryLimitExceededException)
        {
            ModelState.AddModelError("", "Error Save Data");
        }
    }
    return RedirectToAction("getListBook");
}
```

Tạo **View** và chỉnh sửa **layout** cho trang **Edit**

```
@model VnExpress_NguyenDinhAnh.Book
@{
    ViewBag.Title = "Details";
    Layout = "~/Views/Shared/_Layout.cshtml";
}
<h2>Details</h2>
<div>
    <table cellpadding="15" border="1">
        <tr>
            <td>
                @Html.DisplayNameFor(model => model.Title)
            </td>
            <td>
                @Html.DisplayFor(model => model.Title)
            </td>
        </tr>
        <tr>...</tr>
        <tr>...</tr>
        <tr>...</tr>
        <tr>
            <td>
                @Html.DisplayNameFor(model => model.CoverPage)
            </td>
            <td>
                
            </td>
        </tr>
    </table>
    <h2> List Chapter</h2>
    <ul>
        @if (Model.Chapters.Count > 0)
        {
            foreach (var item in Model.Chapters)
            {
                <li>
                    <strong> @item.ChapterName</strong>
                    <br />
                    <span>@item.ShortContent</span>
                </li>
            }
        }
    </ul>
</div>
```

--- Hết LAB 5 – Chúc các em thành công --