

Lab 03: KẾT NỐI CƠ SỞ DỮ LIỆU - LINQ TO SQL

A. TẠO CƠ SỞ DỮ LIỆU

1. Tạo cơ sở dữ liệu trong SQL Server: **RubikStore**
2. Bảng **Loai**

	Column Name	Data Type	Allow Nulls
▶	maloai	int	<input type="checkbox"/>
	tenloai	nvarchar(30)	<input checked="" type="checkbox"/>

3. Bảng **Rubik**

	Column Name	Data Type	Allow Nulls
▶	id	int	<input type="checkbox"/>
	maloai	int	<input checked="" type="checkbox"/>
	ten	nvarchar(100)	<input type="checkbox"/>
	mota	nvarchar(MAX)	<input checked="" type="checkbox"/>
	hang	nvarchar(50)	<input checked="" type="checkbox"/>
	gia	decimal(18, 0)	<input checked="" type="checkbox"/>
	hinh	varchar(50)	<input checked="" type="checkbox"/>
	soluongton	int	<input checked="" type="checkbox"/>
	ngaycapnhat	smalldatetime	<input checked="" type="checkbox"/>

4. Tạo Database Diagram để kiểm tra các bảng được tạo.
5. Script:

```
create database RubikStore
use RubikStore
create table Loai (
    maloai int identity primary key,
    tenloai nvarchar(30)
)
create table Rubik (
    id int identity(1,1) primary key,
    maloai int references Loai(maloai),
    ten nvarchar(100) not null,
    mota nvarchar(max),
    hang nvarchar(50),
    gia decimal(18,0),
    hinh varchar(50),
    soluongton int,
    ngaycapnhat smalldatetime
)
insert into Loai(tenloai) values(N'2x2')
insert into Loai(tenloai) values(N'3x3')
insert into Loai(tenloai) values(N'4x4')
insert into Loai(tenloai) values(N'5x5')
insert into Rubik(maloai,ten,mota,hang,gia,hinh,soluongton,ngaycapnhat)
values(2,N'Rubik 2x2',N'Best Saler',N'Viet
Nam',30000,'/Content/images/rubik1.jpg',20,'12/02/2022')
insert into Rubik(maloai,ten,mota,hang,gia,hinh,soluongton,ngaycapnhat)
values(3,N'Rubik
3x3',N'Connection',N'America',40000,'/Content/images/rubik2.jpg',20,'12/03/2022')
insert into Rubik(maloai,ten,mota,hang,gia,hinh,soluongton,ngaycapnhat)
values(4,N'Rubik 4x4',N'Hints, tips and
solutions',N'UK',50000,'/Content/images/rubik3.jpg',20,'12/24/2022')
```

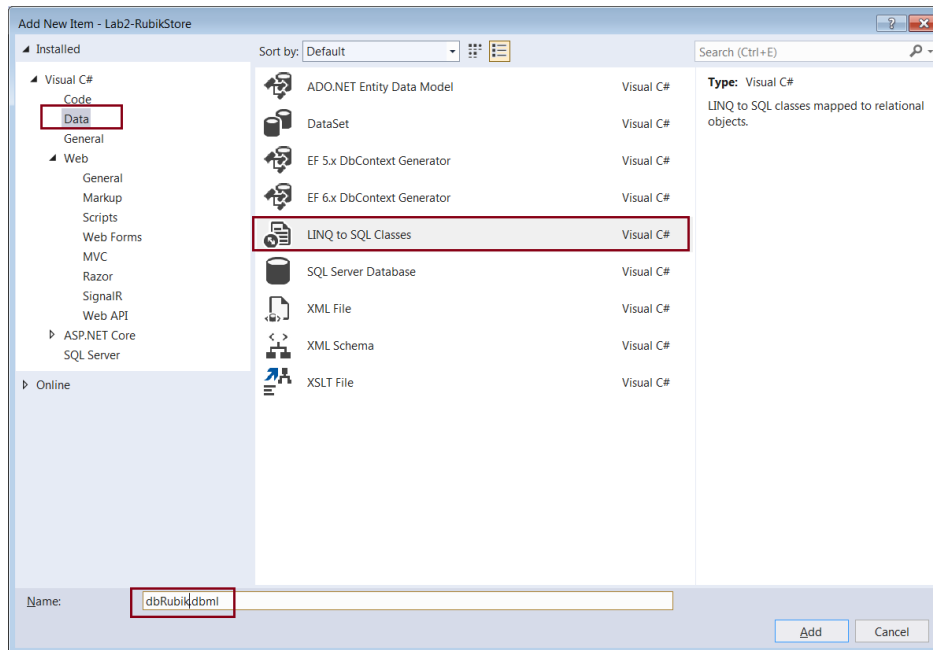
	id	mal...	ten	mota	hang	gia	hinh	soluongt...	ngaycapnhat
1	1	2	Rubik 2x2	Best Saler	Viet Nam	30000	/Content/images/rubik1.jpg	20	2022-12-02 00:00:00
2	2	3	Rubik 3x3	Connection	America	40000	/Content/images/rubik2.jpg	20	2022-12-03 00:00:00
3	3	4	Rubik 4x4	Hints, tips and solutions	UK	50000	/Content/images/rubik3.jpg	20	2022-12-24 00:00:00

B. HƯỚNG DẪN THỰC HIỆN PROJECT

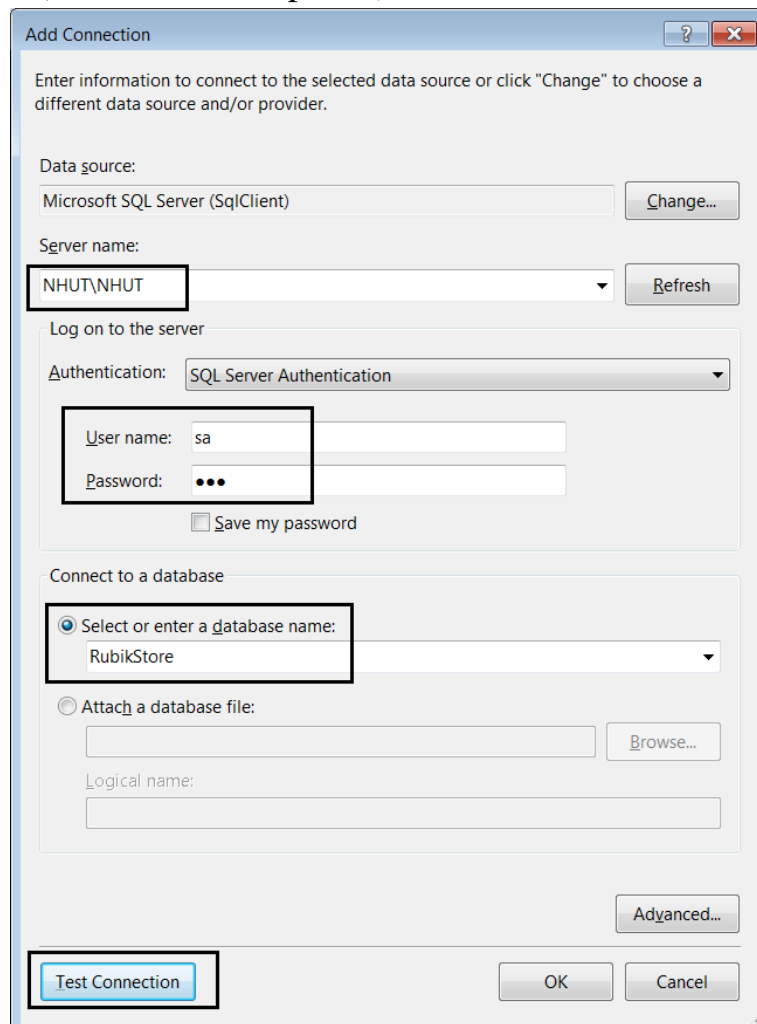
1. Tạo project ASP.NET MVC → lab3_hotensv

2. Tạo kết nối Linq trong project

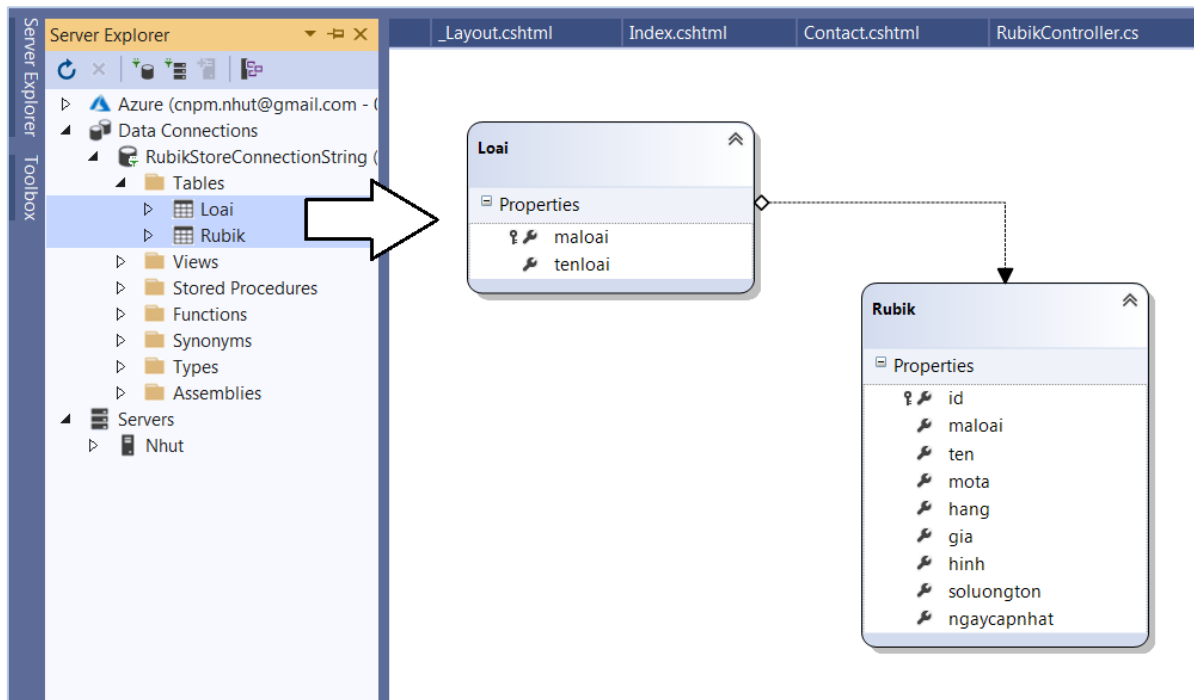
- Click phải vào Models → Add → New Item ... → *dbRubik*



- Mở Server Explorer (View/Server Explorer) → Connect to Database

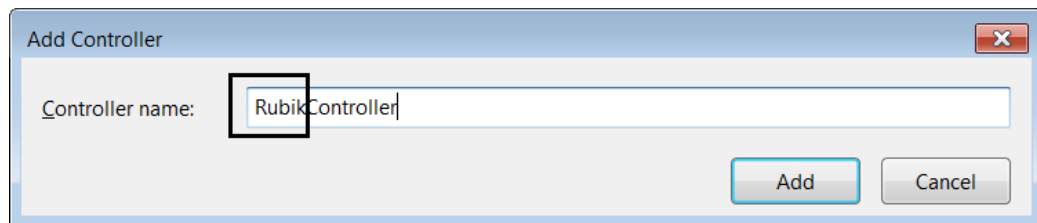


- Drag chuột kéo các bảng vào vùng **dbRubik.dbml**

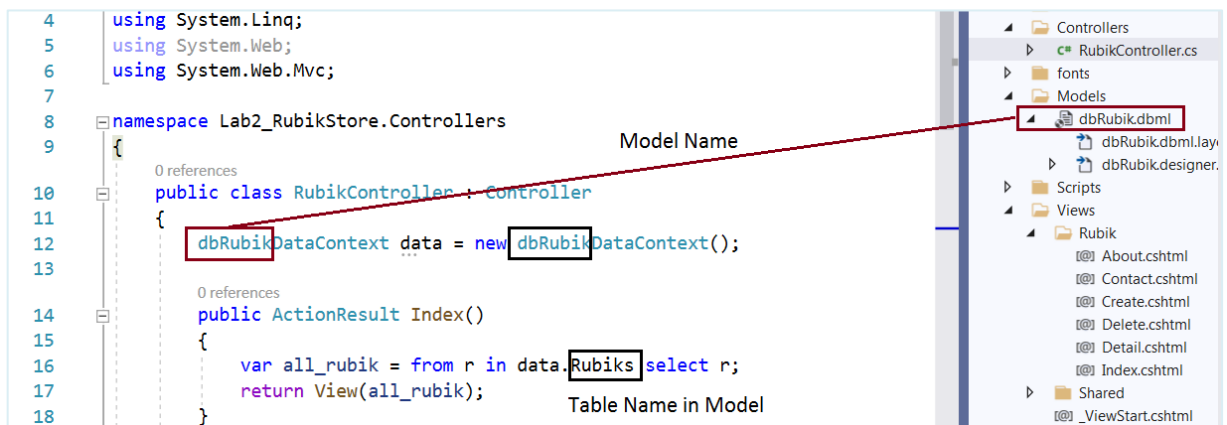


3. Tạo Controller: RubikController

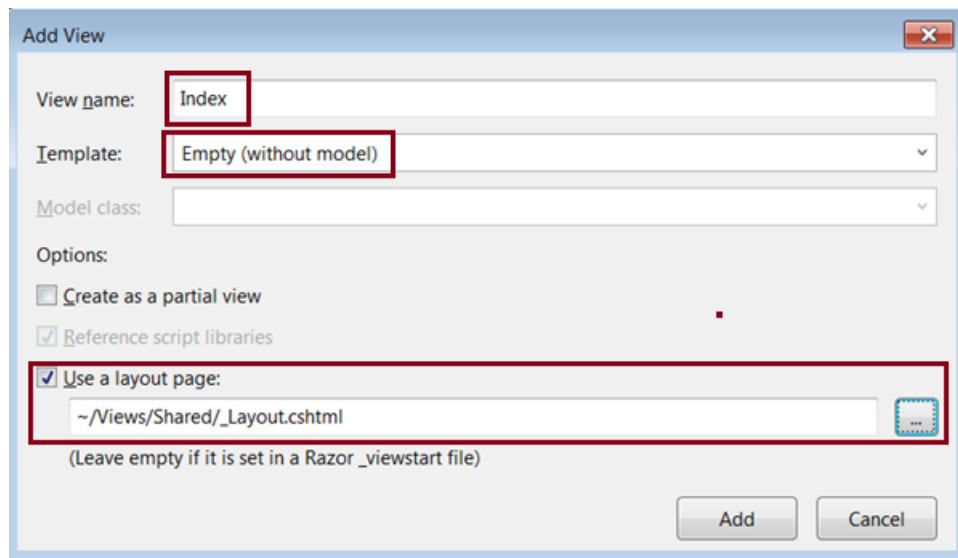
- Click phải vào Controllers → Add → Controller... → RubikController



- Thêm code vào file TheloaiController.cs



- Tạo View cho trang Index



- Layout trang ***Index.cshtml***

```

@model IEnumerable<Lab2_RubikStore.Models.Rubik>
@{
    ViewBag.Title = "Index";
    Layout = "~/Views/Shared/_Layout.cshtml";
}

<h2>Index</h2>
<p>
    @Html.ActionLink("Create New", "Create")
</p>
<div class="row">
    @foreach (var item in Model)
    {
        <div class="col-lg-4 col-md-4 col-sm-6 col-xs-12">
            <div class="panel panel-default">
                <div class="panel panel-heading">
                    <strong>@item.ten</strong>
                </div>
                <div class="panel-body">
                    <p><strong>Loại: </strong>@item.maloai</p>
                    <p><strong>Mô tả: </strong>@item.mota</p>
                    <p><strong>Hãng: </strong>@item.hang</p>
                    <p><strong>Giá: </strong>@item.gia</p>
                    <p></p>
                    <p><strong>Còn lại: </strong>@item.soluongton</p>
                    <p><strong>Ngày cập nhật: </strong>@item.ngaycapnhat</p>
                </div>
                <div class="panel-footer clearfix">
                    <div class="pull-right">
                        @Html.ActionLink("Read more...", "Detail", new { id = item.id
                    }, new { @class = "btn btn-default" })
                        @Html.ActionLink("Delete", "Delete", new { id = item.id }, new
                    { @class = "btn btn-success" })
                        @Html.ActionLink("Edit", "Edit", new { id = item.id }, new {
                    @class = "btn btn-success" })
                    </div>
                </div>
            </div>
        </div>
    }
</div>

```

- Thay đổi trang hiển thị mặc định trong **App_Start / RouteConfig.cs**

```

namespace Lab2_RubikStore
{
    1 reference
    public class RouteConfig
    {
        1 reference
        public static void RegisterRoutes(RouteCollection routes)
        {
            routes.IgnoreRoute("{resource}.axd/{*pathInfo}");

            routes.MapRoute(
                name: "Default",
                url: "{controller}/{action}/{id}",
                defaults: new { controller = "Rubik", action = "Index", id =
            });
        }
    }
}

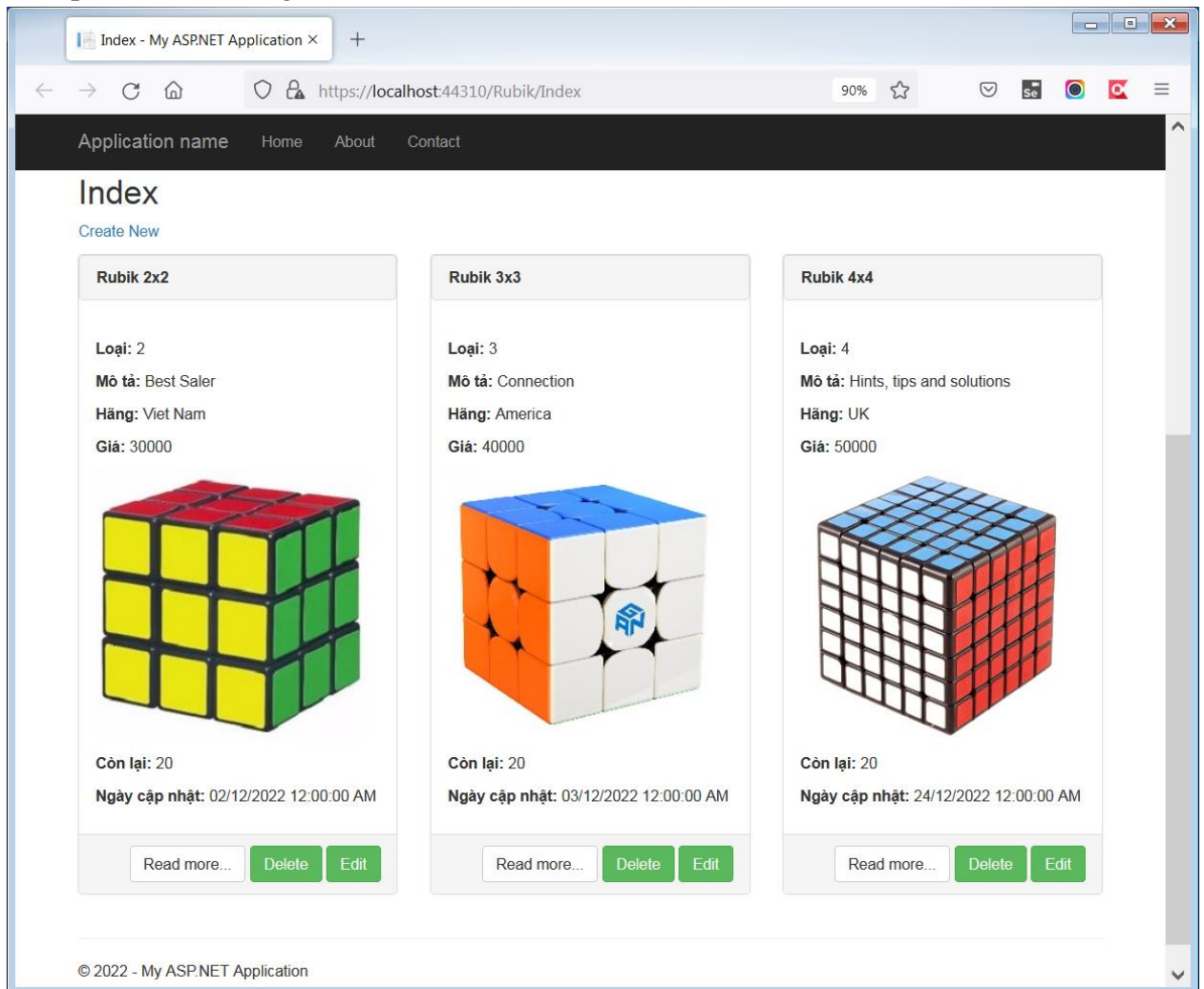
```

Controller Name View Name

Solution 'Lab2-RubikStore' (1 of 1)

- Lab2-RubikStore
 - Connected Services
 - Properties
 - References
 - App_Data
 - App_Start
 - BundleConfig.cs
 - FilterConfig.cs
 - RouteConfig.cs
 - Content
 - Controllers
 - RubikController.cs
 - fonts
 - Models
 - dbRubik.dbml
 - dbRubik.dbml.iay
 - dbRubik.designer
 - Scripts

- Kết quả thực thi trang Index.cshhtml

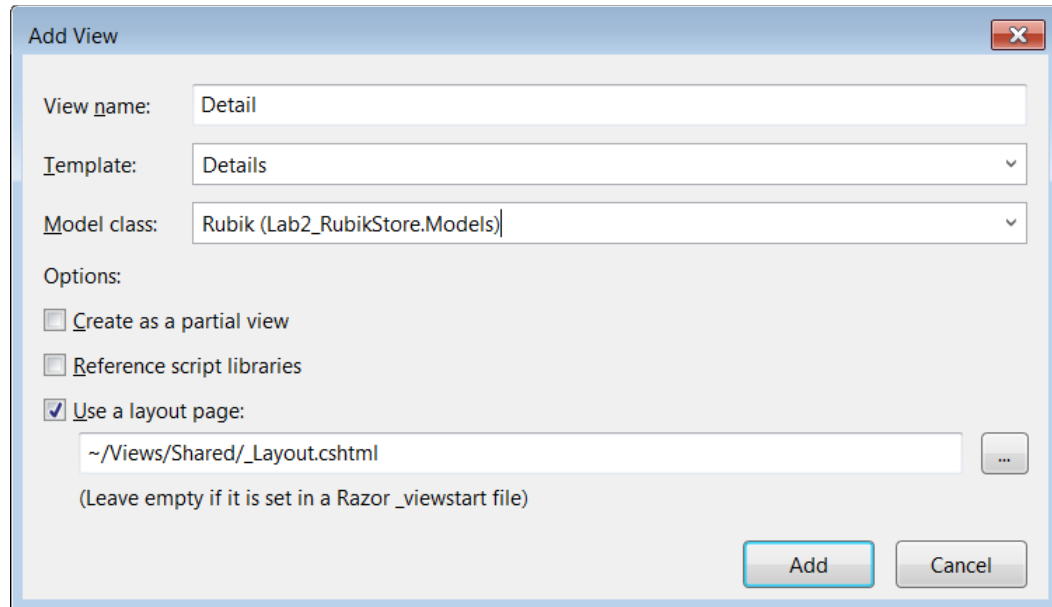


4. Chức năng Detail

- Code trong RubikController.cs

```
public ActionResult Detail(int id)
{
    var D_sach = data.Rubiks.Where(m => m.id == id).First();
    return View(D_sach);
}
```

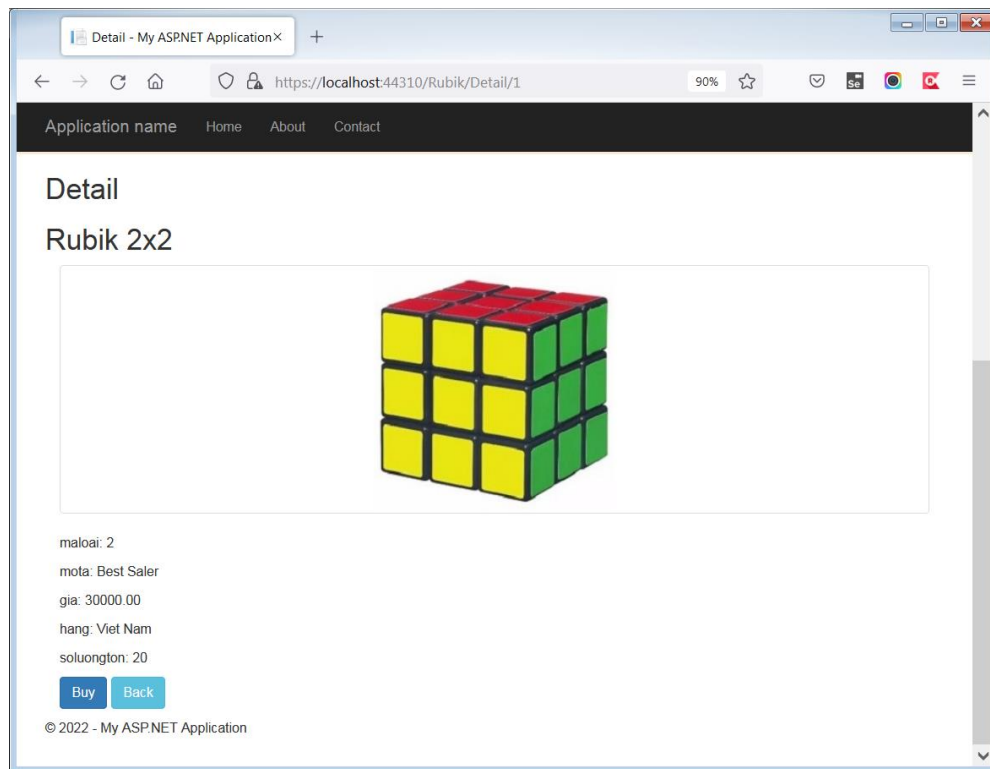
- Tạo trang Detail.cshtml



- Hiệu chỉnh layout cho trang Detail.cshtml

```
1  @model Lab2_RubikStore.Models.Rubik
2  @{
3      ViewBag.Title = "Detail";
4      Layout = "~/Views/Shared/_Layout.cshtml";
5  }
6  <h2>Detail</h2>
7  <h2>@Html.DisplayFor(model => model.ten)</h2>
8  <div class="col-sm-12 col-md-12">
9      <div class="thumbnail">
10         
11     </div>
12     <div class="caption">
13         <p>Mã loại: @Html.DisplayFor(model => model.maloai)</p>
14         <p>Mô tả: @Html.DisplayFor(model => model.mota)</p>
15         <p>Giá: @Html.DisplayFor(model => model.gia)</p>
16         <p>Hãng: @Html.DisplayFor(model => model.hang)</p>
17         <p>Số lượng tồn: @Html.DisplayFor(model => model.soluongton)</p>
18         <p>
19             <a href="#" class="btn btn-primary" role="button">Buy</a>
20             @Html.ActionLink("Back", "Index", "", new { @class = "btn btn-info" })
21         </p>
22     </div>
23 </div>
```

- Kết quả thực thi trang Detail



5. Tạo trang Create

- Code chức năng Create trong Controllers/RubikController.cs

```
public ActionResult Create()
{
    return View();
}
[HttpPost]
public ActionResult Create(FormCollection collection, Rubik s)
{
    var E_ten = collection["ten"];
    var E_mota = collection["mota"];
    var E_hang = collection["hang"];
    var E_gia = Convert.ToDecimal(collection["giaban"]);
    var E_hinh = collection["hinh"];
    var E_ngaycapnhat = Convert.ToDateTime(collection["ngaycapnhat"]);
    var E_soluongton = Convert.ToInt32(collection["soluongton"]);
    if (string.IsNullOrEmpty(E_ten))
    {
        ViewData["Error"] = "Don't empty!";
    }
    else
    {
        s.ten = E_ten.ToString();
        s.mota = E_mota.ToString();
        s.hang = E_hang.ToString();
        s.gia = E_gia;
        s.hinh = E_hinh.ToString();
        s.ngaycapnhat = E_ngaycapnhat;
        s.soluongton = E_soluongton;
        data.Rubiks.InsertOnSubmit(s);
        data.SubmitChanges();
        return RedirectToAction("Index");
    }
    return this.Create();
}
```

- Layout cho trang Create.cshtml

- Layout thêm cho trang Create.cshtml chức năng chọn hình

```
<div class="form-group">
  <div class="col-md-10">
    <strong>Hình</strong>
    @Html.EditorFor(model => model.hinh, new { htmlAttributes = new { @class =
"form-control" } })
    @Html.ValidationMessageFor(model => model.hinh, "", new { @class = "text-
danger" })
    <input type="file" name="fileUpload" id="fileUpload" accept="image/*"
style="display:none;" />
    <input type="button" id="btnUpload" value="Chọn" class="btn btn-success" />
  </div>
</div>
```

```
@section upload
{
```

```
  <script>
```

```
    $(function () {
      $('#btnUpload').click(function () {
        $('#fileUpload').trigger('click');
      });
    });

    $('#fileUpload').change(function () {
      if (window.FormData !== undefined) {
        var fileUpload = $('#fileUpload').get(0);
        var files = fileUpload.files;
        var formData = new FormData();
        formData.append('file', files[0]);
        $.ajax(
          {
            type: 'POST',
            url: '/Rubik/ProcessUpload',
            contentType: false,
            processData: false,
            data: formData,
            success: function (urlImage) {
              $('#pictureUpload').attr('src', urlImage);
              $('#hinh').val(urlImage);
            },
            error: function (err) {
```



```

        alert('Error ', err.statusText);
    }
    });
}
});
</script>
}

```

- Thêm đoạn code lấy đường dẫn hình và file RubikController.cs

```

public string ProcessUpload(HttpPostedFileBase file)
{
    if (file == null)
    {
        return "";
    }
    file.SaveAs(Server.MapPath("~/Content/images/" + file.FileName));
    return "/Content/images/" + file.FileName;
}

```

- Thêm dòng code sau vào file *_Layout.cshtml*

```
@RenderSection("upload", required: false)
```

- Kết quả thực thi trang Create.cshtml

- Kiểm tra csdl Rubik:

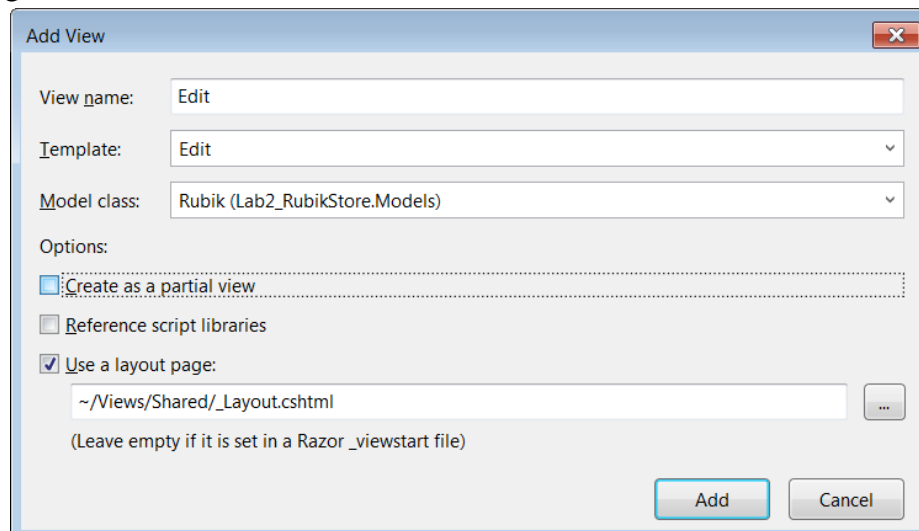
	id	mal...	ten	mota	hang	gia	hinh	soluongt...	ngaycapnhat
1	1	2	Rubik 2x2	Best Saler	Viet Nam	30000	/Content/images/rubik1.jpg	20	2022-12-02 00:00:00
2	2	3	Rubik 3x3	Connection	America	40000	/Content/images/rubik2.jpg	20	2022-12-03 00:00:00
3	3	4	Rubik 4x4	Hints, tips and solutions	UK	50000	/Content/images/rubik3.jpg	20	2022-12-24 00:00:00
4	4	1	Rubik 6x6	New Model	Thailand	0	/Content/images/rubik7.jpg	25	2022-03-14 00:00:00

6. Tạo trang Edit.cshtml

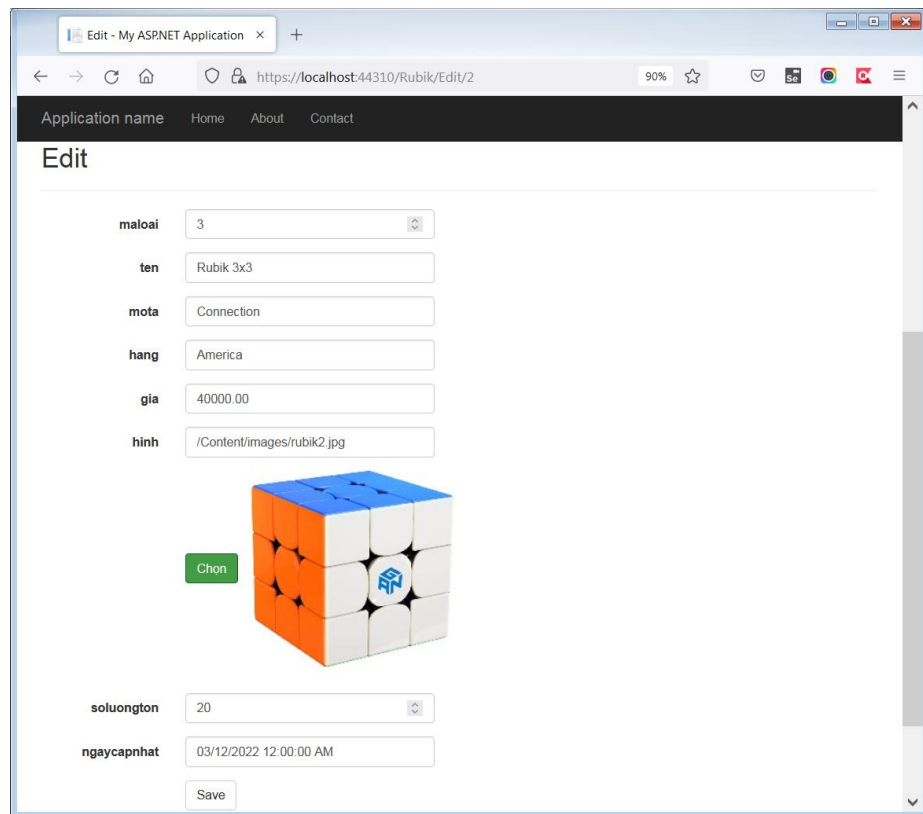
- Code trong RubikController.cs

```
public ActionResult Edit(int id)
{
    var E_sach = data.Rubiks.First(m => m.id == id);
    return View(E_sach);
}
[HttpPost]
public ActionResult Edit(int id, FormCollection collection)
{
    var E_rubik = data.Rubiks.First(m => m.id == id);
    var E_ten = collection["ten"];
    var E_mota = collection["mota"];
    var E_hang = collection["hang"];
    var E_gia = Convert.ToDecimal(collection["giaban"]);
    var E_hinh = collection["hinh"];
    var E_ngaycapnhat = Convert.ToDateTime(collection["ngaycapnhat"]);
    var E_soluongton = Convert.ToInt32(collection["soluongton"]);
    E_rubik.id = id;
    if (string.IsNullOrEmpty(E_ten))
    {
        ViewData["Error"] = "Don't empty!";
    }
    else
    {
        E_rubik.ten = E_ten.ToString();
        E_rubik.mota = E_mota.ToString();
        E_rubik.hang = E_hang.ToString();
        E_rubik.gia = E_gia;
        E_rubik.hinh = E_hinh.ToString();
        E_rubik.ngaycapnhat = E_ngaycapnhat;
        E_rubik.soluongton = E_soluongton;
        UpdateModel(E_rubik);
        data.SubmitChanges();
        return RedirectToAction("Index");
    }
    return this.Edit(id);
}
```

- Tạo trang Edit.cshtml



- Layout cho trang Edit.cshtml
- Kết quả thực thi trang Edit.cshtml

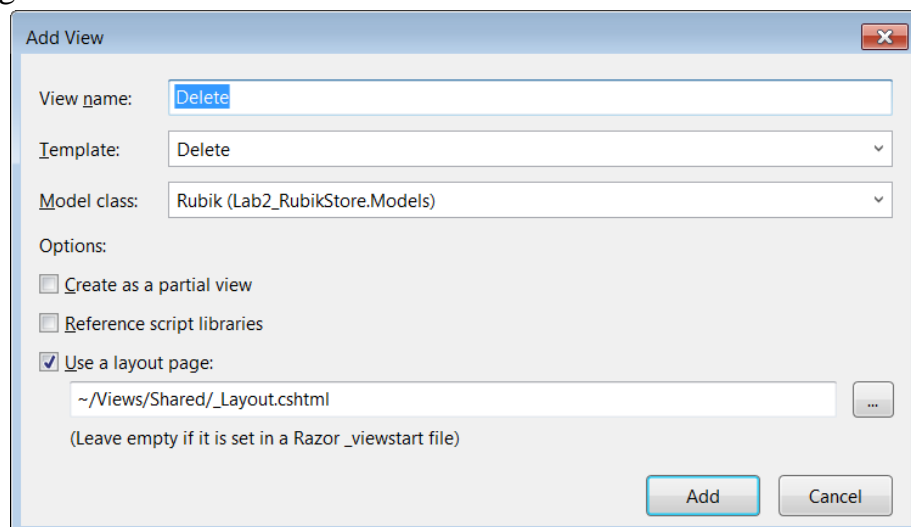


7. Tạo trang Delete.cshtml

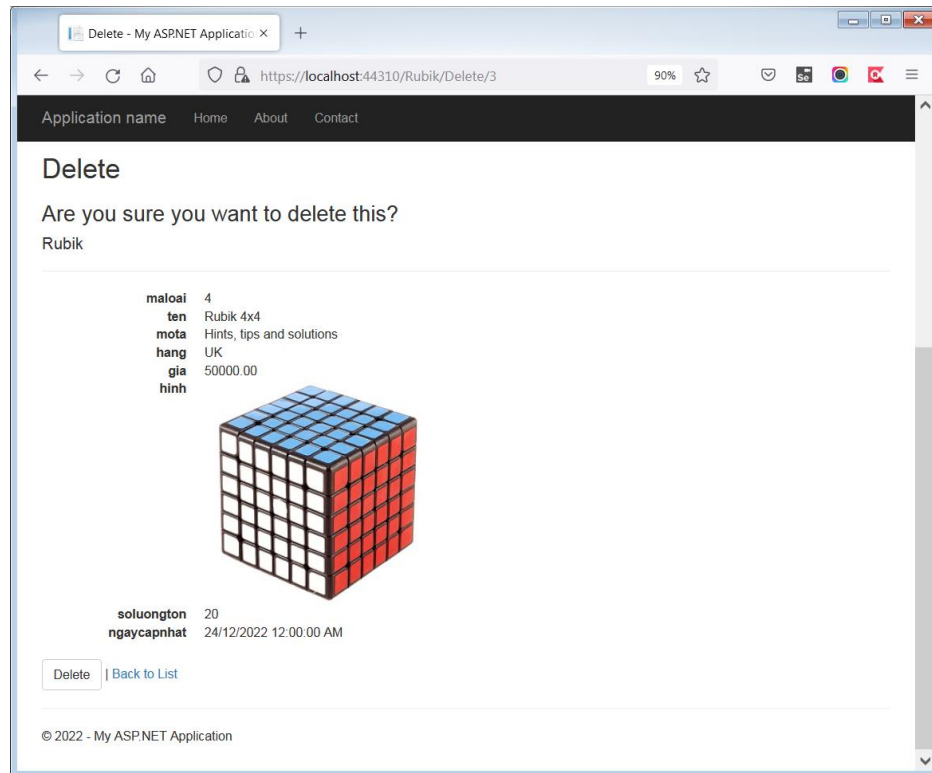
- Code trong RubikController.cs

```
public ActionResult Delete(int id)
{
    var D_sach = data.Rubiks.First(m => m.id == id);
    return View(D_sach);
}
[HttpPost]
public ActionResult Delete(int id, FormCollection collection)
{
    var D_sach = data.Rubiks.Where(m => m.id == id).First();
    data.Rubiks.DeleteOnSubmit(D_sach);
    data.SubmitChanges();
    return RedirectToAction("Index");
}
```

- Tạo trang Delete.cshtml

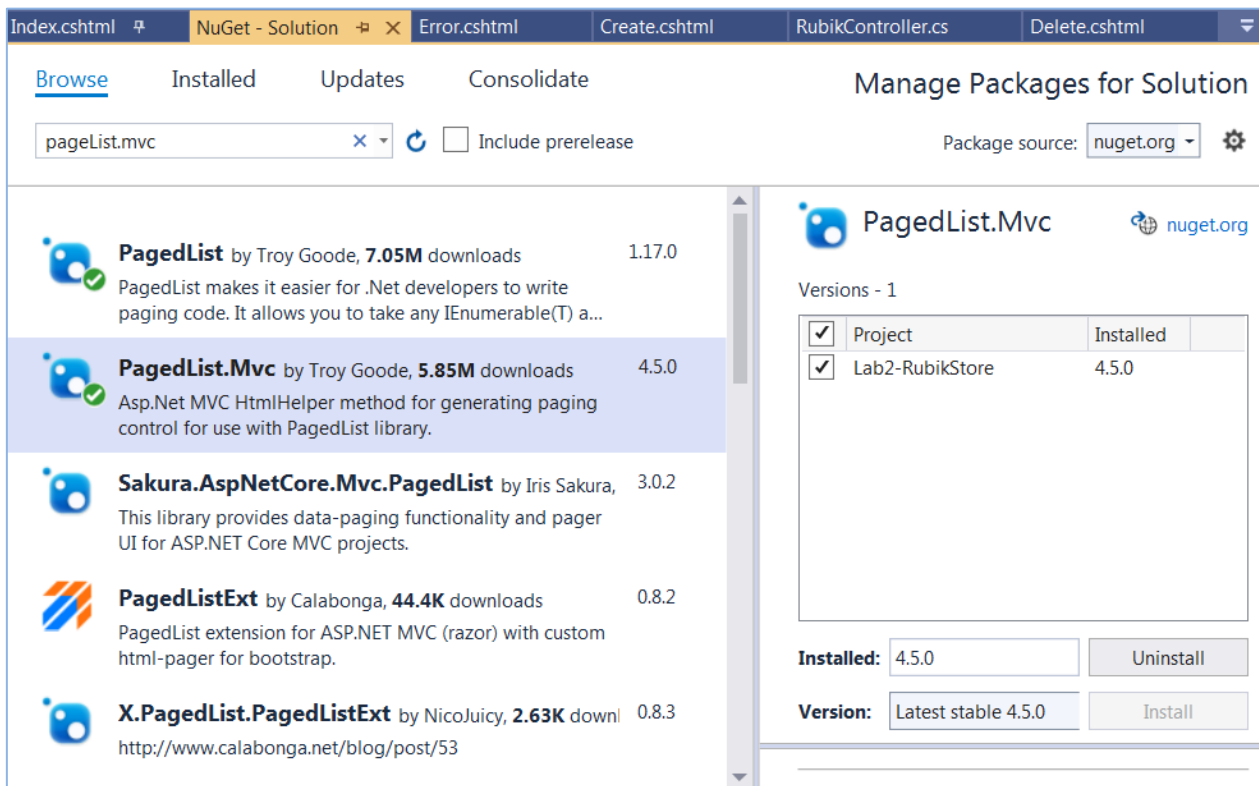


- Layout cho trang Delete.cshtml
- Kết quả thực thi trang Delete.cshtml



8. Phân trang cho trang Home/Index.cshtml

- Cài đặt PagedList.Mvc: Tools / NuGet Package Manager / Manager NuGet Manager for Solution...



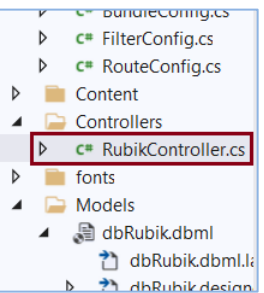
- Hiệu chỉnh code phần Index trong Controllers/RubikController.cs

```

public ActionResult Index(int? page)
{
    if (page == null) page = 1;
    var all_rubik = (from s in data.Rubiks select s).OrderBy(m => m.id)
    int pageSize = 3;
    int pageNum = page ?? 1;

    return View(all_rubik.ToPagedList(pageNum, pageSize));
}

```



- Hiệu chỉnh layout trang Index.cshtml

```

@model PagedList.IPagedList<Lab2_RubikStore.Models.Rubik>
@using PagedList.Mvc;

```

Layout trang Index.cshtml (không thay đổi)

```

<div>
    <div>
        Trang @(Model.PageCount < Model.PageNumber ? 0 : Model.PageNumber) /
    @Model.PageCount
    </div>
    <div class="MenuTrang">
        @Html.PagedListPager(Model, page => Url.Action("Index", new { page = page }))
    </div>
</div>
<style>
    .MenuTrang li {
        display: inline;
    }
</style>
<style type="text/css">
    #mau-nut a {
        clear: both;
        background-color: orange;
        color: snow;
    }
    #mau-nut a:hover {
        background-color: darkcyan;
        color: snow;
    }
</style>
<script src="https://code.jquery.com/jquery-3.5.1.min.js"></script>
<script>
    $(document).ready(function () {
        var maxLength = 100;
        $(".show-read-more").each(function () {
            var myStr = $(this).text();
            if ($.trim(myStr).length > maxLength) {
                var newStr = myStr.substring(0, maxLength);
                var removedStr = myStr.substring(maxLength, $.trim(myStr).length);
                $(this).empty().html(newStr);
                $(this).append(' <a href="javascript:void(0);" class="read-more">đọc
tiếp...</a>');
                $(this).append('<span class="more-text">' + removedStr + '</span>');
            }
        });
        $(".read-more").click(function () {
            $(this).siblings(".more-text").contents().unwrap();
            $(this).remove();
        });
    });

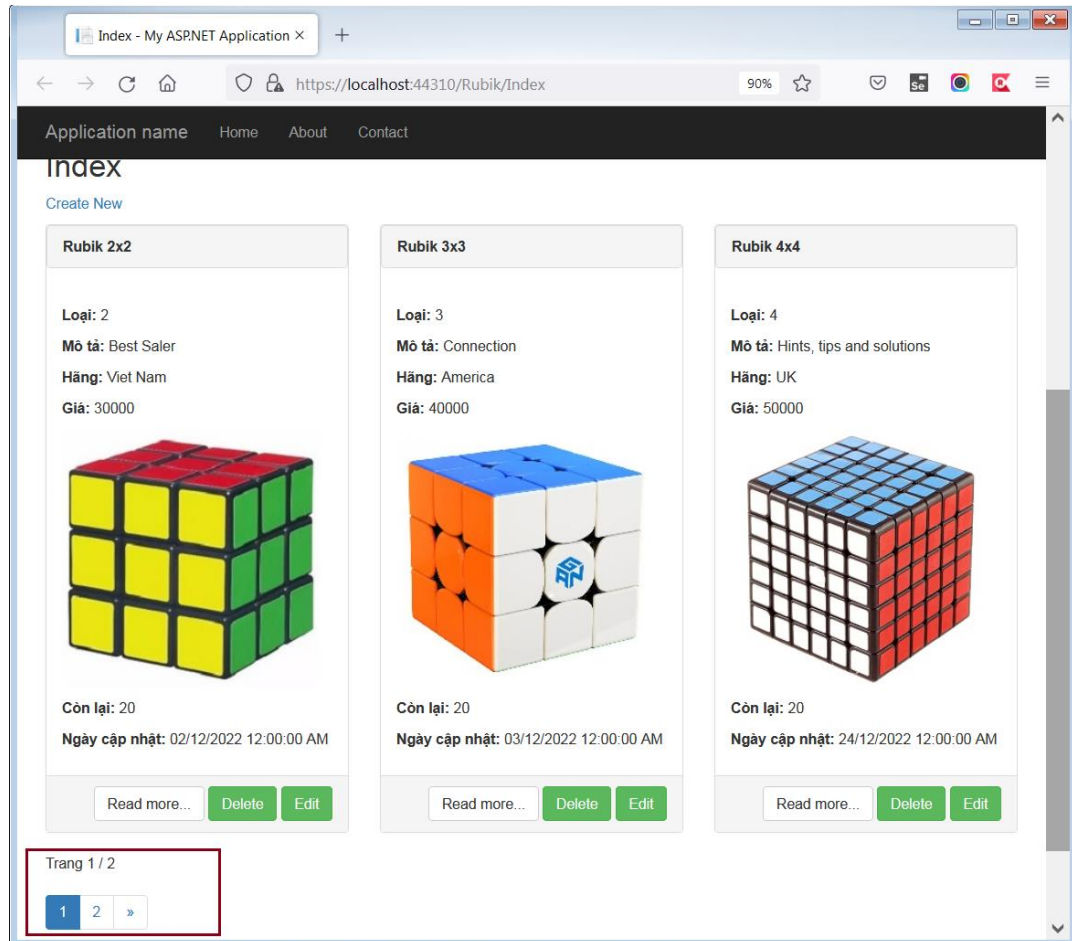
```

```

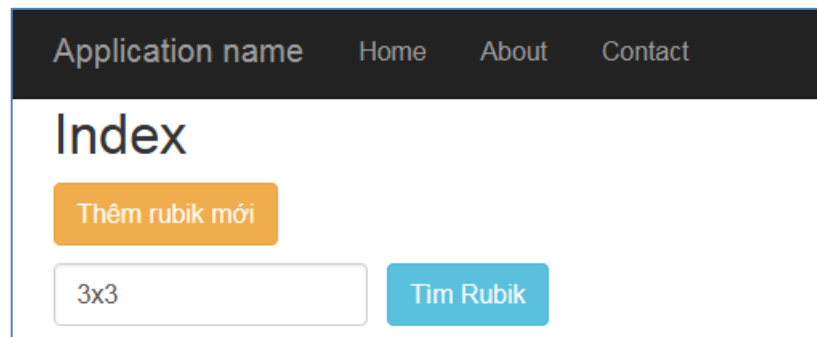
    });
</script>
<style>
    .show-read-more .more-text {
        display: none;
    }
</style>

```

- Kết quả thực hiện:



9. Chức năng tìm kiếm sản phẩm theo tên Rubik



10. Thêm menu Home (dropdown list) phân loại sản phẩm: Rubik 2x2, 3x3, 4x4... để hiển thị sản phẩm theo từng loại.