

# Lab09: AJAX

## 1 Prepare in advance

- Create project with MVC template.
- Download file EStoreResoures.zip. After that, unzip this file.
- Restore database and Generate Entity Model.
- You can download the pre-built project template file from <https://github.com/niie-it/aspnetcore/raw/main/MyEShop01Start.zip>
- Create new controller Ajax (AjaxController) and inject DbContext to easy connect to database via this context.

## 2 Instructions for implementation

### 2.1 Get familiar with AJAX

Create a clock to get time from the Server.



```
Index.cshtml
1
2  @{
3      ViewData["Title"] = "Index";
4  }
5
6  <h1>Demo AJAX</h1>
7  <div>Bây giờ là:
8      <span class="text-danger" id="dongho"></span>
9  </div>
```

```
AjaxController.cs
5  public class AjaxController : Controller
6  {
7      public IActionResult Index()
8      {
9          return View();
10     }
11 }
```

- a. **In the Ajax Controller, create an Index() action and a corresponding Index() view:**

```
public IActionResult Index()
{
    return View();
}
```

- b. **Create ServerTime() action to response server time**

```
public IActionResult ServerTime()
{
    return Content(DateTime.Now.ToString("dd/MM/yyyy hh:mm:ss"));
}
```

- c. **Adjust Index() view to display the clock to get the time from the server:**

```
@section Scripts{
<script>
    function layGioServer()
    {
        $.ajax({
            url: '/Ajax/ServerTime',
            type: 'GET',
            success: function (response) {
                $("#dongho").html(response);
            }
        });
    }
    $(function () {
        layGioServer();
        setInterval(layGioServer, 1000);
    });
</script>
}
```

- d. **Run the test**

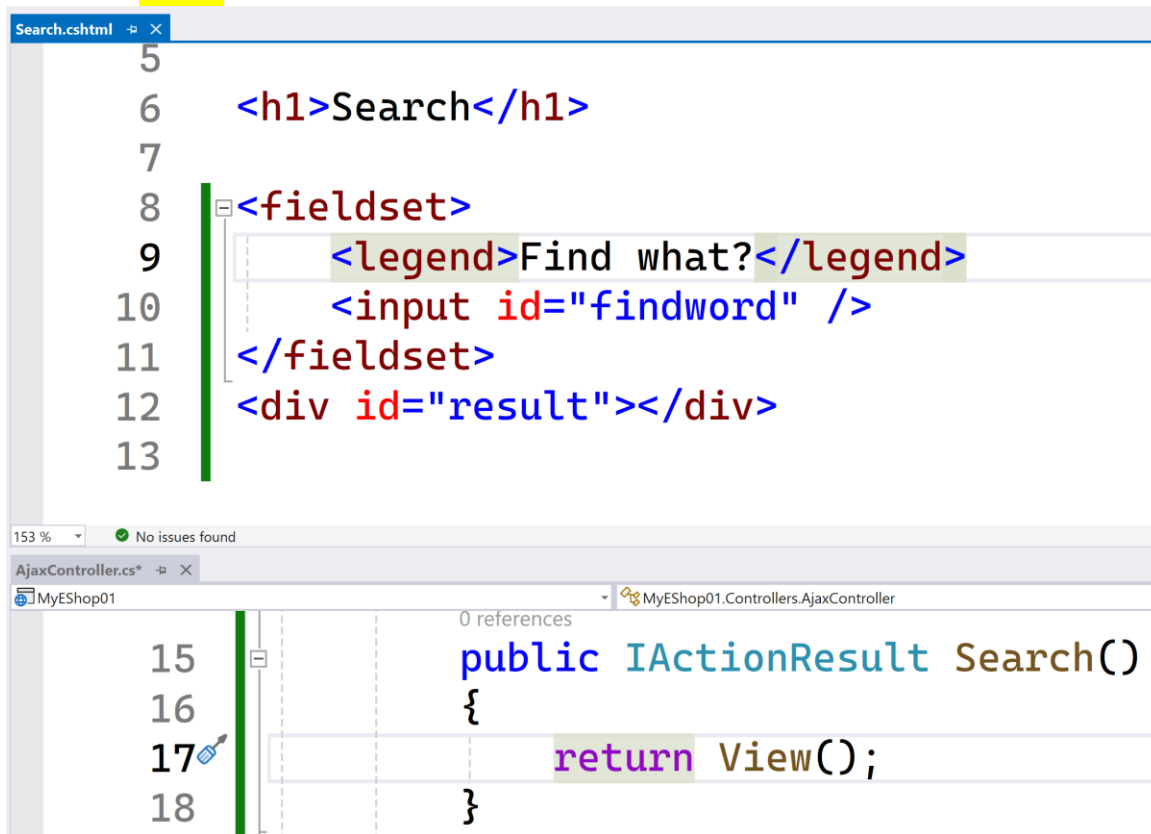
## 2.2 Simple Search

### 2.2.1 Create Search() action for GET method

```
public IActionResult Search()
{
    return View();
}
```

### 2.2.2 Create Search() view

```
<fieldset>
    <legend>Find what?</legend>
    <input id="findword" />
</fieldset>
<div id="result"></div>
```



### 2.2.3 Create new ViewModel to display result

```
public class KetQuaTimKiemVM
{
    public int MaHh { get; set; }
    public string TenHh { get; set; }
    public double DonGia { get; set; }
    public DateTime NgaySX { get; set; }
    public string Loai { get; set; }
}
```

### 2.2.4 Create Search() action for POST method

```
[HttpPost]
public IActionResult Search(string keyword)
{
    var dsHangHoa = _context.HangHoa.Where(p => p.TenHh.Contains(keyword));

    var data = dsHangHoa.Select(hh => new KetQuaTimKiemVM
    {
        MaHh = hh.MaHh,
        TenHh = hh.TenHh,
        DonGia = hh.DonGia.Value,
        NgaySX = hh.NgaySx,
        Loai = hh.MaLoaiNavigation.TenLoai
    }).ToList();
    return PartialView("TimKiemPartial", data);
}
```

### 2.2.5 Create PartialView to display search results

Name of this partial view is **TimKiemPartial**.

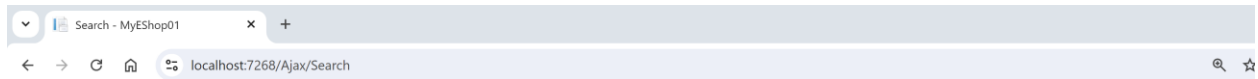
```
@model IEnumerable<KetQuaTimKiemVM>

<table class="table table-hover">
    <thead>
        <tr>
            <th>Mã</th>
            <th>Tên hàng hóa</th>
            <th>Đơn giá</th>
            <th>Ngày sản xuất</th>
            <th>Loại</th>
        </tr>
    </thead>
    <tbody>
        @foreach (var item in Model)
        {
            <tr>
                <td>@item.MaHh</td>
                <td>@item.TenHh</td>
                <td>@item.DonGia.ToString("#,##0.00") đ</td>
                <td>@item.NgaySX.ToString("dd/MM/yyyy")</td>
                <td>@item.Loai</td>
            </tr>
        }
    </tbody>
</table>
```

### 2.2.6 Edit Search() view to call API via AJAX function

```
@section Scripts{
<script>
    $(function () {
        $("#findword").keyup(function (v) {
            //if user input less than 3 characters, do not send to server
            if ($(this).val().length < 3) return;

            $.ajax({
                url: "/Ajax/Search",
                type: "POST",
                data: { keyword: $(this).val() },
                success: function (res) {
                    $("#result").html(res)
                },
                error: function (xhr, textStatus, error) {
                    alert(xhr.statusText);
                }
            });
        });
    });
</script>
}
```



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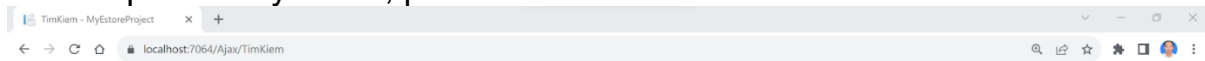
## Search

Find what?

MaHh	TenHh	DonGia	NgaySX	Loai
1002	Change	19.00 đ	31/07/2009	Đồng hồ
1057	Ravioli Angelo	19.50 đ	01/08/2009	Nước hoa
1084	Change-New	19.00 đ	01/08/2009	Đồng hồ

### 2.3 Advance search

Search product by name, price from ... to...



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## Tìm kiếm

Tên hàng hóa:

Giá từ:  Giá đến:

Mã	Tên hàng hóa	Đơn giá	Ngày sản xuất	Loại
1002	Change	19.00 đ	31/07/2009	Đồng hồ
1057	Ravioli Angelo	19.50 đ	01/08/2009	Nước hoa
1084	Change-New	19.00 đ	01/08/2009	Đồng hồ

#### 2.3.1 Design TimKiem() View

Create new action **TimKiem()**, link to view **TimKiem()**.

```
<h1>Tìm kiếm</h1>
<fieldset>
  Tên hàng hóa: <input id="keyword" placeholder="Tìm gì?" />
<br />
  Giá từ: <input type="number" id="giaTu" />
  Giá đến: <input type="number" id="giaDen" />
<br />
  <button type="button" id="btnTim">Tìm</button>
```

```
</fieldset>
<div id="result"></div>
```

### 2.3.2 Create TimKiem() action for POST method

```
[HttpPost]
public IActionResult TimKiem(string? name, double? fromPrice, double? toPrice)
{
    var dsHangHoa = _context.HangHoas.Include(hh =>
hh.MaLoaiNavigation).AsQueryable();
    if (name != null)
    {
        dsHangHoa = dsHangHoa.Where(hh => hh.TenHh.Contains(name));
    }
    if (fromPrice != null)
    {
        dsHangHoa = dsHangHoa.Where(hh => hh.DonGia.Value >= fromPrice);
    }
    if (toPrice != null)
    {
        dsHangHoa = dsHangHoa.Where(hh => hh.DonGia.Value <= toPrice);
    }
    var data = dsHangHoa.Select(hh => new KetQuaTimKiemVM
    {
        MaHh = hh.MaHh,
        TenHh = hh.TenHh,
        DonGia = hh.DonGia.Value,
        NgaySX = hh.NgaySx,
        Loai = hh.MaLoaiNavigation.TenLoai
    }).ToList();
    return PartialView("TimKiemPartial", data);
}
```

### 2.3.3 Edit TimKiem() view to call Ajax

```
@section Scripts{
<script>
$(function () {
    //gắn sự kiện keyup cho textfield
    $("#btnTim").click(function () {
        $.ajax({
            url: "/Ajax/TimKiem",
            type: "POST",
            data: {
                name: $("#keyword").val(),
                fromPrice: $("#giaTu").val(),
                toPrice: $("#giaDen").val(),
            },
            success: function (res) {
                $("#result").html(res);
            },
            error: function (xhr, textStatus, error) {
```

```
        alert(xhr.statusText);
    }
    });
});
</script>
}
```

—End—