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Develop experiences

AJAX with ASP.NET MVC

Telerik Software Academy
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Unobtrusive JavaScript

Unobtrusive JavaScript

- No script injected into page
  - Only data-attributes with necessary AJAX settings
- Requires unobtrusive extensions script
  - jquery.unobtrusive-ajax.js (AJAX helpers)

```
<a data-ajax="true"
   data-ajax-method="GET"
   data-ajax-mode="replace"
   data-ajax-update="#timeDisplay"
   href="/Home/ServerTime">
    Get server time
</a>
```

AJAX Helpers
in ASP.NET MVC

AJAX Helpers in ASP.NET MVC

- AJAX helpers essentially provides AJAX functionality to ASP.NET MVC applications
- Two core features of AJAX helpers:
  - Invoke an action method using AJAX
    - Use the Ajax.ActionLink() helper
  - Submit an entire form using AJAX
    - Use the Ajax.BeginForm() helper
- When calling AJAX helpers you provide AjaxOptions object with configurations

AjaxOptions Object

- Url – URL to send request
- HttpMethod – Request method (GET or POST)
- InsertionMode – What to do with received data
  - InsertAfter, InsertBefore or Replace
- UpdateTargetId – Element to be populated
- LoadingElementId – Show/hide when loading
- Confirm – Confirmation message
- Events (JavaScript functions)
  - OnSuccess, OnFailure, OnBegin, OnComplete

Demo: Ajax.ActionLink Helper

- Defines an action link for getting data
- Makes an AJAX request
- Can be configured with AjaxOptions

```
@Ajax.ActionLink("Get server time", "ServerTime", null,
    new AjaxOptions {
        UpdateTargetId = "timeDisplay",
        LoadingElementId = "timeDisplayLoading",
        HttpMethod = "GET",
        InsertionMode = InsertionMode.Replace,
        OnBegin = "OnAjaxRequestBegin",
        OnFailure = "OnAjaxRequestFailure",
        OnSuccess = "OnAjaxRequestSuccess",
        OnComplete = "OnAjaxRequestComplete"
    }, new { @class = "btn btn-primary" })
```

Demo: Ajax.BeginForm Helper

- Defines an form for sending data
- Makes an AJAX request
- Can be configured with AjaxOptions

```
@using (Ajax.BeginForm("Search",
    new AjaxOptions {
        UpdateTargetId = "results",
        InsertionMode = InsertionMode.Replace
    }))
{
    <input type="text" name="query" />
    <input type="submit" />
}
<div id="results">@Html.Partial("_BookResult", Model)</div>
```

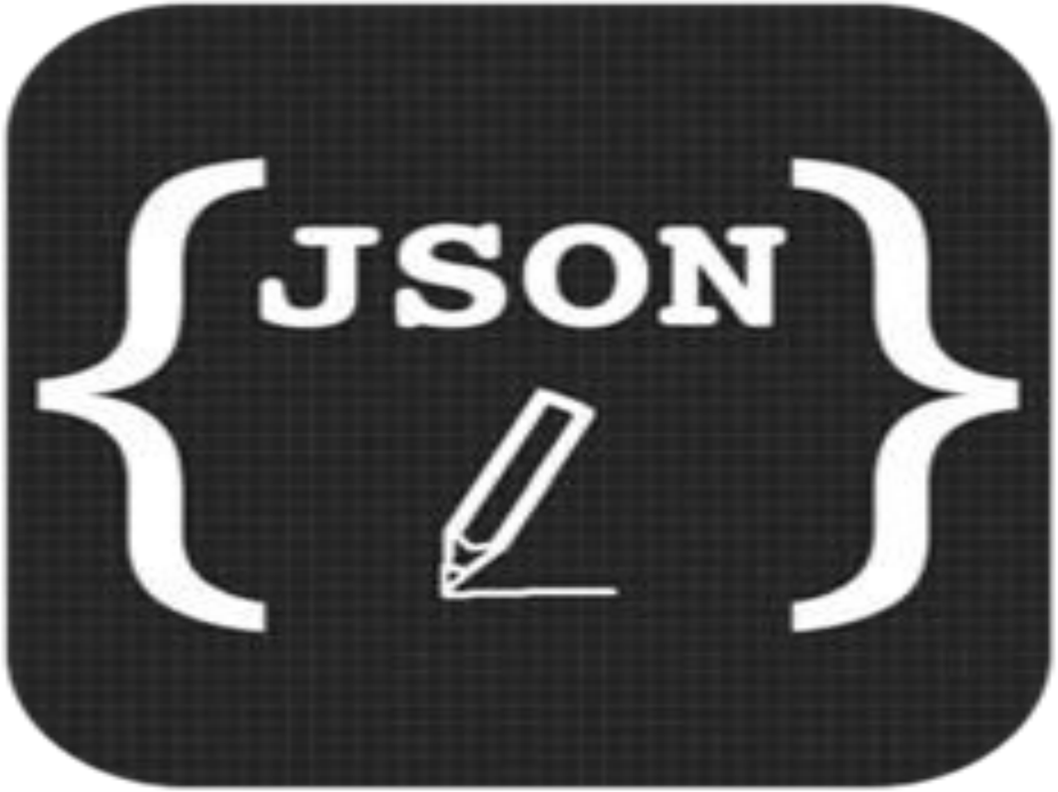
Demo: AJAX with PartialView

- Return a PartialView to the helpers
- Can be done through the original action

```
public ActionResult Search(string query)
{
    var result = BooksData
        .GetAll()
        .AsQueryable()
        .Where(book => book.Title.ToLower().Contains(query.ToLower()))
        .Select(BookViewModel.FromBook)
        .ToList();

    return this.PartialView("_BookResult", result);
}
```

JSON and MVC



JSON And MVC

- Ajax Helpers cover simple scenarios
  - Replacing HTML content
  - Partial page rendering
- Other scenarios require some JavaScript
  - Auto-complete textboxes
  - Client-side validation
  - Invoking JSON services and actions
  - Animations

Demo: JSON and MVC

- Return JsonResult in the action

```
public JsonResult AllBooks()
{
    var books = BooksData.GetAll();
    return this.Json(books, JsonRequestBehavior.AllowGet);
}
```

- Use getJSON method from jQuery

```
jQuery.getJSON("AllBooks", "", function(data) {
    jQuery(data).each(function (index, element) {
        var newBookElement = $("<li>+element.Title+"</li>");
        $("#books").append(newBookElement);
    });
});
```

AJAX with ASP.NET MVC

Questions?

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