

**# Action Result:** In ASP.NET MVC, action methods are public methods inside a controller class that handle HTTP requests. These methods can perform various operations based on the client's action and return a variety of response types. Typically, action methods return an instance of `ActionResult`, which is the base interface for different result types in ASP.NET MVC.

Action Results and Their Helper Methods:

### **ViewResult**

Helper Method: `View()`

Description: Renders a view (usually an HTML page) as a web page. It is the most commonly used return type when you want to display a UI page to the user.

### **PartialViewResult**

Helper Method: `PartialView()`

Description: Renders a partial view, which is a fragment of an HTML page that can be inserted into another view without a full page reload (often used for updating parts of a page dynamically).

### **RedirectToRouteResult**

Helper Methods: `RedirectToAction()` or `RedirectToRoute()`

Description: Redirects the user to another action method or route in the application. This is useful for navigating between different pages or actions, often after a form submission.

### **JavaScriptResult**

Helper Method: `JavaScript()`

Description: Returns a JavaScript script to be executed on the client-side. This result type is typically used to send dynamic script responses to the browser (e.g., triggering a JavaScript function after an action).

### **FileResult**

Helper Method: File()

Description: Returns a binary file output, such as a downloadable file (e.g., PDF, image, or document). It allows the controller to send a file to the client as a response.

## **ContentResult**

Helper Method: Content()

Description: Returns user-defined content in the response, such as plain text, HTML, or any other content type specified by the developer.

### **Example of an Action Method Using These Results:**

```
public class ProcessController : Controller
{
    // Default Action Method
    public IActionResult Index()
    {
        return View(); // Returns a view to the client
    }

    // Action that returns a partial view
    public IActionResult GetPartial()
    {
        return PartialView(); // Renders a partial view
    }

    // Action that redirects to another action
    public IActionResult RedirectToHome()
```

```
{  
    return RedirectToAction("Index", "Home"); // Redirects to Home controller's Index  
action  
}
```

// Action that returns a JavaScript result

```
public IActionResult GetScript()
```

```
{  
    return JavaScript("alert('Hello World!');"); // Executes JavaScript on the client  
}
```

// Action that returns a file to download

```
public IActionResult DownloadFile()
```

```
{  
    byte[] fileBytes = System.IO.File.ReadAllBytes("path/to/file");  
    return File(fileBytes, "application/octet-stream", "filename.ext"); // Returns a file to  
download  
}
```

// Action that returns plain text content

```
public IActionResult GetContent()
```

```
{  
    return Content("This is plain text content."); // Returns user-defined content  
}  
}
```

### **Summary:**

ViewResult: Renders a full view.

PartialViewResult: Renders a partial view for AJAX-style updates.

**RedirectToRouteResult:** Redirects to another action or route.

**JavaScriptResult:** Returns JavaScript to execute on the client-side.

**FileResult:** Sends a file as a response.

**ContentResult:** Returns custom content to the client.