ActionResult

MVC framework includes various Result classes, which can be returned from an action method. The result classes represent different types of responses, such as HTML, file, string, JSON, javascript, etc. The following table lists all the result classes available in ASP.NET MVC.

Result Class	Description
ViewResult	Represents HTML and markup.
EmptyResult	Represents No response.
ContentResult	Represents string literal.
FileContentResult/ FilePathResult/ FileStreamResult	Represents the content of a file.
JavaScriptResult	Represent a JavaScript script.
JsonResult	Represent JSON that can be used in AJAX.
RedirectResult	Represents a redirection to a new URL.
RedirectToRouteResult	Represent another action of same or other controller.
PartialViewResult	Returns HTML from Partial view.
HttpUnauthorizedResult	Returns HTTP 403 status.

The ActionResult class is a base class of all the above result classes, so it can be the return type of action method that returns any result listed above. However, you can specify the appropriate result class as a return type of action method.

The Index() method of the StudentController in the above figure uses the View() method to return а ViewResult (which is derived from Controller the ActionResult class). The base class includes the View() method along with other methods that return a particular type of result, as shown in the below table.

Result Class	Description	Base Controller Method
ViewResult	Represents HTML and markup.	View()
EmptyResult	Represents No response.	
ContentResult	Represents string literal.	Content()
FileContentResult, FilePathResult, FileStreamResult	Represents the content of a file.	File()
JavaScriptResult	Represents a JavaScript script.	JavaScript()
JsonResult	Represents JSON that can be used in AJAX.	Json()
RedirectResult	Represents a redirection to a new URL.	Redirect()
RedirectToRouteResult	Represents redirection to another route.	RedirectToRoute()
PartialViewResult	Represents the partial view result.	PartialView()
HttpUnauthorizedResult	Represents HTTP 403 response.	

As you can see in the above table, the <code>View()</code> method returns the <code>ViewResult</code>, the <code>Content()</code> method returns a string, the <code>File()</code> method returns the content of a file, and so on. Use different methods mentioned in the above table to return a different type of result from an action method.

Action Method Parameters

Every action methods can have input parameters as normal methods. It can be primitive data type or complex type parameters, as shown below.

```
Example: Action Method Parameters

[HttpPost]
public ActionResult Edit(Student std)
{
    // update student to the database
    return RedirectToAction("Index");
}
```

```
[HttpDelete]
public ActionResult Delete(int id)
{
    // delete student from the database whose id matches with specified id
    return RedirectToAction("Index");
}
```

Please note that action method paramter can be Nullable Type.

By default, the values for action method parameters are retrieved from the request's data collection. The data collection includes name/values pairs for form data or query string values or cookie values. Model binding in ASP.NET MVC automatically maps the URL query string or form data collection to the action method parameters if both names match. Visit <u>model binding</u> section for more information on it.

Points to Remember :

All the public methods in the Controller class are called Action methods.

The Action method has the following restrictions.

- Action method must be public. It cannot be private or protected.
- Action method cannot be overloaded.
- Action method cannot be a static method.

ActionResult is a base class of all the result type which returns from Action method.

The base Controller class contains methods that returns appropriate result type e.g. View(), Content(), File(), JavaScript() etc.

The Action method can include Nullable type parameters.