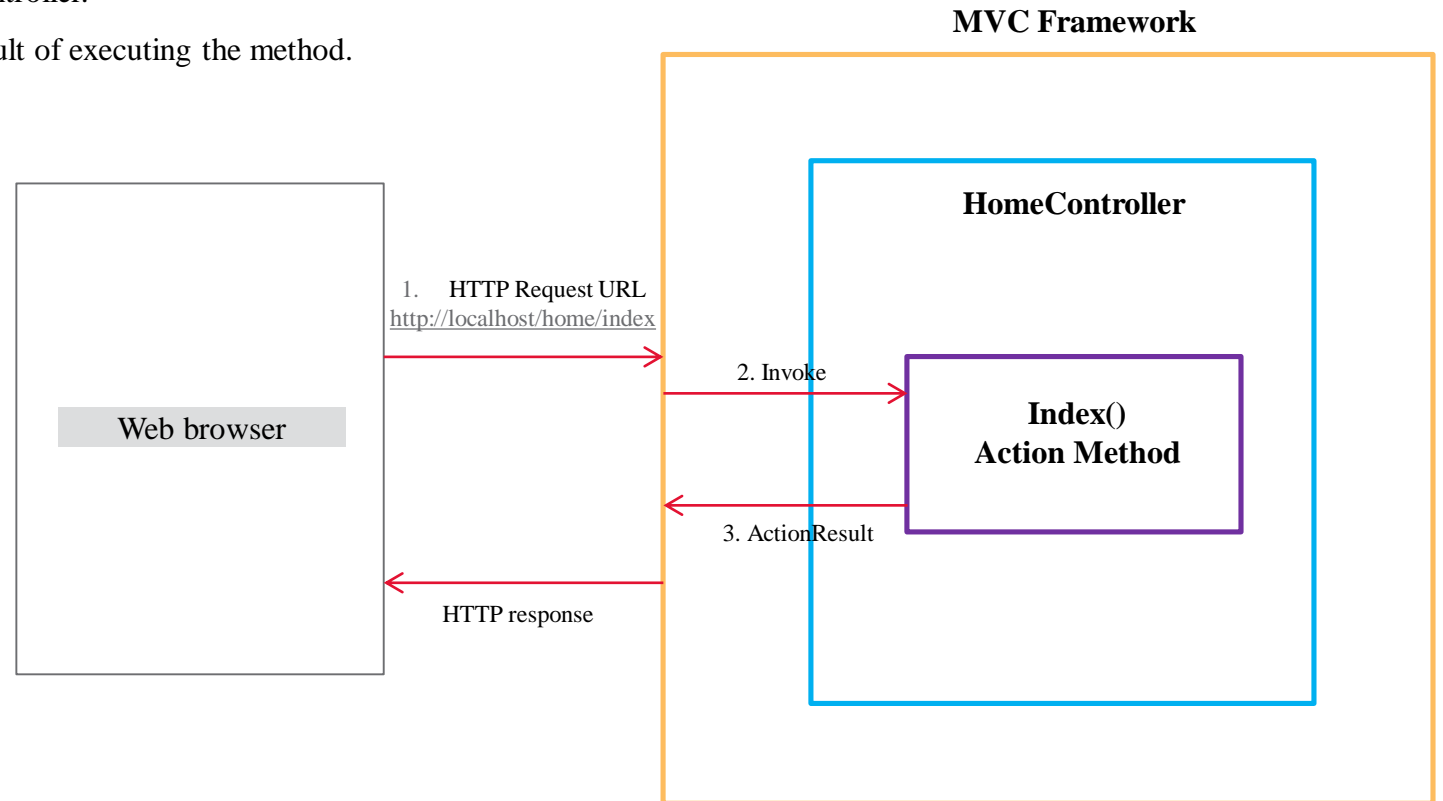# Module-4
ActionResults

What are Action method?

- The tasks of controller like communicate with models, get data from database, return a view, etc. are done by controllers action method

- A controller class can contains one or more action methods, also known as controller actions.

- Action methods are public methods in controller classes.

- Are responsible for processing the requests that are sent to the controller.

- Typically returns an ActionResult object that encapsulates the result of executing the method.

- By, default, it generates a response in the form of ActionResult

MVC Framework

Steps followed –

1. The browser send a http request in the form of home/index.

2. The MVC framework invokes the controller action method based on the request URL.

3. The action method executes and returns an ActionResult object. This object encapsulates the result of the action method execution.

4. The MVC framework converts an ActionResult to HTTP response and sends the response back to the browser.

Note : In this module we will use Employee controller instead of Home controller

Web browser

1. HTTP Request URL
http://localhost/home/index

2. Invoke

3. ActionResult

HTTP response

HomeController

**Index()
Action Method**

Rules to follow while creating Action Methods –

- They must be declared as public

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

- They cannot be declared as static

- They cannot have overloaded versions based on parameters.

Invoking Action Methods –

- In an ASP.NET MVC application, we can create multiple action methods in a controller.

- We can invoke an action method by specifying a URL in the web browser containing the name of the controller and action method to invoke

- Eg – http://localhost/home/index. (Here **home** is a **controller** and **index** is the **action method**)

- In order for the Action Method to return result, a view with same name as the action method must be created in that controller name folder else we will get an error shown below:

Server Error in '/' Application.

The view 'Index' or its master was not found or no view engine supports the searched locations. The following locations were searched:
~/Views/Home/Index.aspx
~/Views/Home/Index.ascx
~/Views/Shared/Index.aspx
~/Views/Shared/Index.ascx
~/Views/Home/Index.cshtml
~/Views/Home/Index.vbhtml
~/Views/Shared/Index.cshtml
~/Views/Shared/Index.vbhtml

What is ActionResult?

- ActionResult is an abstract base class for all implementing classes that provides different types of results.

- It consists of HTML in combination with server-side and client-side scripts to respond to user actions.

- ActionResult is a result of action method/pages or return types of action methods/pages handlers.

- Action result is a parent class of many of the derived classes that have associated helpers.

- The IActionResult return type is appropriate when multiple ActionResult return types are possible in an action.
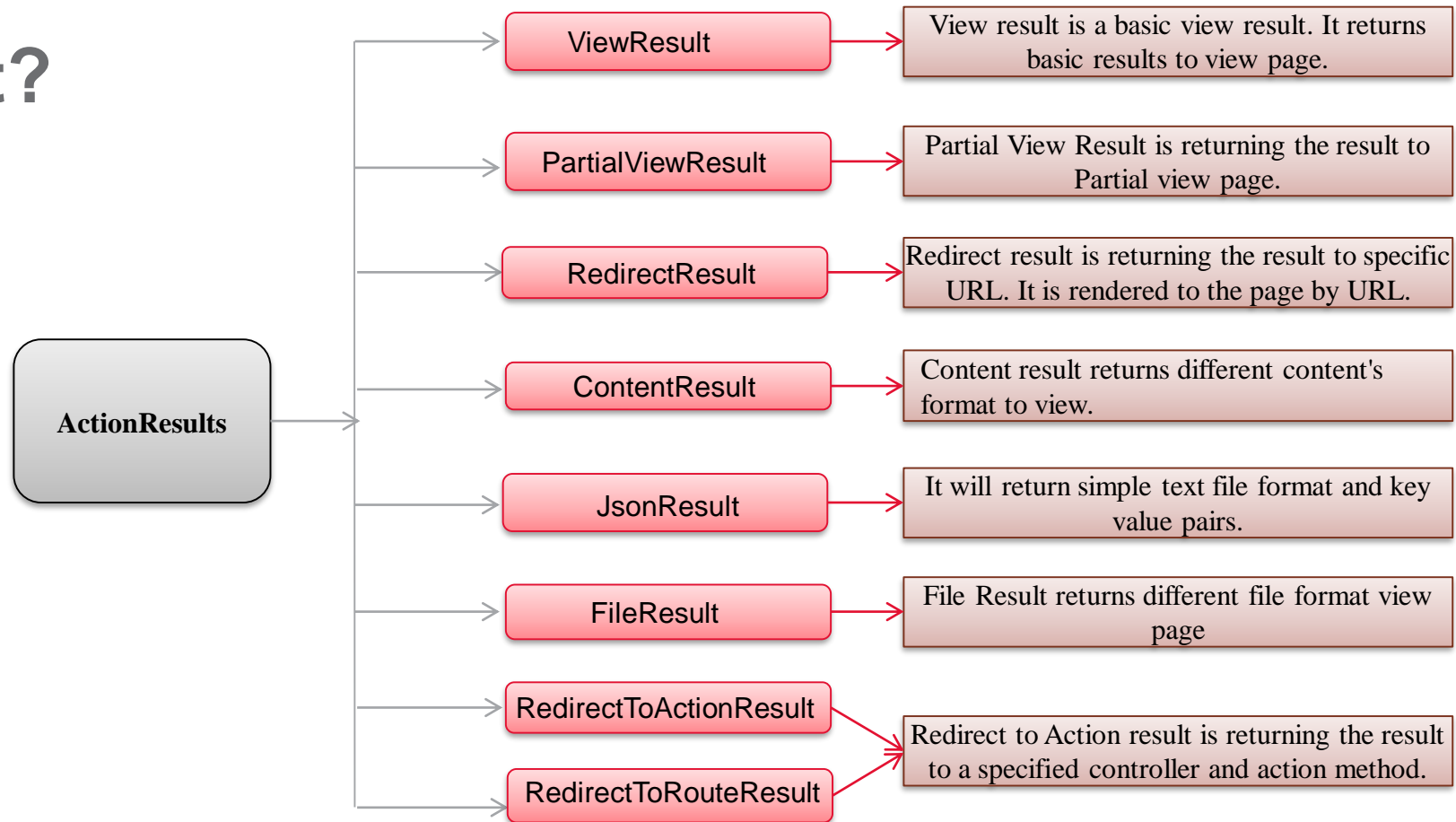
ActionResults

ViewResult	→	View result is a basic view result. It returns basic results to view page.
PartialViewResult	→	Partial View Result is returning the result to Partial view page.
RedirectResult	→	Redirect result is returning the result to specific URL. It is rendered to the page by URL.
ContentResult	→	Content result returns different content's format to view.
JsonResult	→	It will return simple text file format and key value pairs.
FileResult	→	File Result returns different file format view page
RedirectToActionResult		Redirect to Action result is returning the result to a specified controller and action method.
RedirectToRouteResult	→	

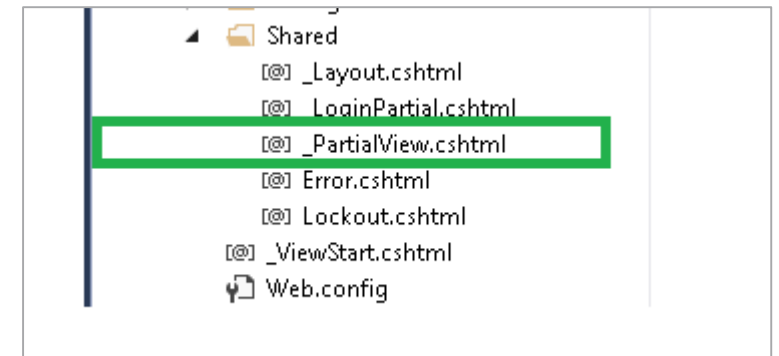**Diagram: Different types of ActionResults**

- **View Results –**

  View result is a basic view result. It returns basic results to view page. View result can return data to view page through which class is defined in the model. View page is a simple HTML page. Here view page has ".cshtm" extension.
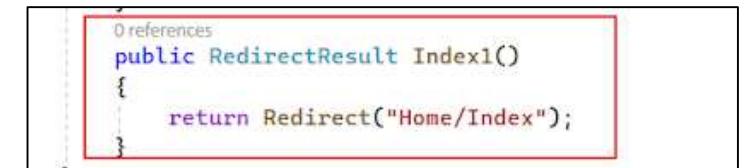
- **Partial View Results –**

  Partial View Result is returning the result to Partial view page. Partial view is one of the views that we can call inside Normal view page.

  We should create a Partial view inside shared folder, otherwise we cannot access the Partial view. The diagram is shown above the Partial view page and Layout page because layout page is a Partial view. Partial View Result class is also derived from Action Result.

- **Redirect Results –**

  Redirect result is returning the result to specific URL. It is rendered to the page by URL. If it gives wrong URL, it will show 404 page errors.
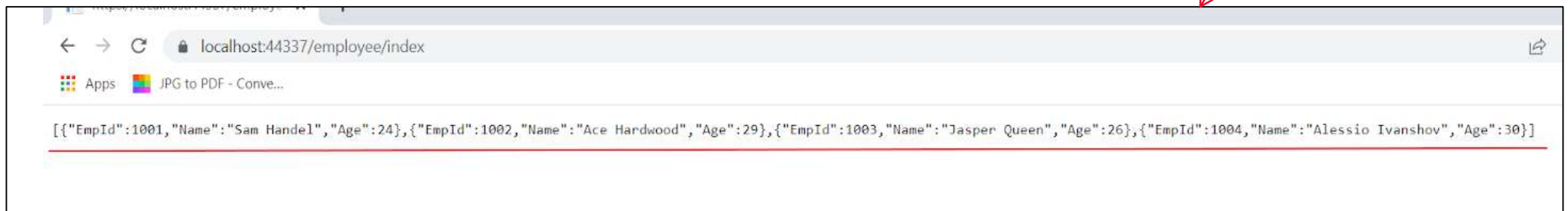
- **Redirect to Action Results –**

  Redirect to Action result is returning the result to a specified controller and action method. Controller name is optional in Redirect to Action method. If not mentioned, Controller name redirects to a mentioned action method in current Controller. Suppose action name is not available but mentioned in the current controller, then it will show 404 page error.

- **JSON Results –**

  Json result is a significant Action Result in MVC. It will return simple text file format and key value pairs. If we call action method, using Ajax, it should return Json result.

- **Content Results –**

  Content result returns different content's format to view. MVC returns different format using content return like
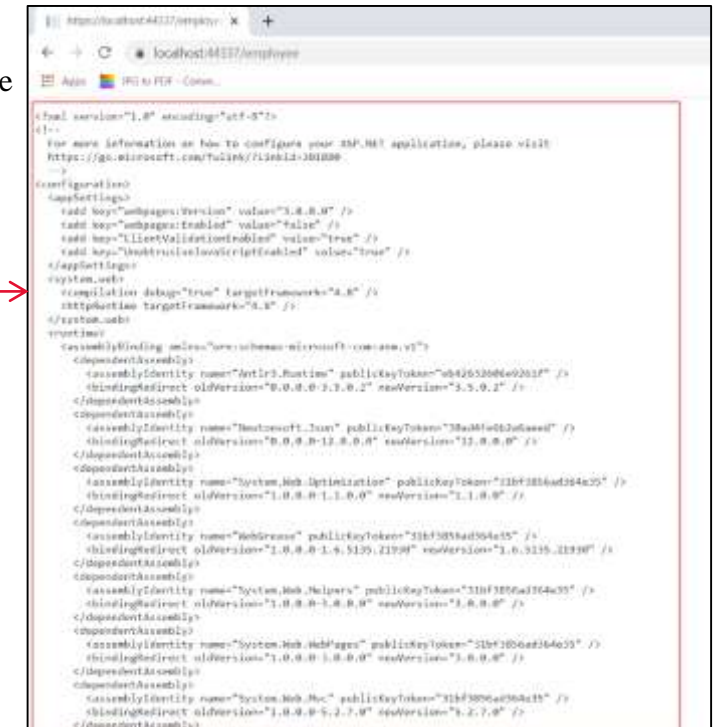
  HTML format, Java Script format and any other format.


```csharp
0 references
public ActionResult Index()
{
    return Content("<script>alert('This is Alert');</script>");

}
```


localhost:44337 says

This is Alert

OK

- **File Results –**

  File Result returns different file format view page when we implement file download concept in MVC using file

  result.


```csharp
// GET: Employee
0 references
public ActionResult Index()
{
    return File("Web.config", "text");

}
```

THANK YOU