Data Validation and Data Passing

Data Validation

- Helps to ensure that the received data is correct and valid.
- Data should be validated at client side and server side.
- Prevent unwanted attack.

Data Validation Techniques

Server Side

Client Side

Server Side Validation

- Helps to protect your data from dirty input.
- As a best practice you must use.
- Server Side Validation Ways:
    - Explicit Model Validation (Traditional)
    - Data Annotations Model Validation

Client Side Validation

- Make web page highly interactive and user friendly.
- Save a number of request to server.
- Client Side Validation Ways:
    - JavaScript
    - Third Party JS Library/framework

Model State

- A collection of name and value pairs that are submitted to the server during a POST.
- Also contains error messages about each name-value pair, if such errors exist, during a POST action.
- ModelState is a property of a Controller instance that inherits Microsoft.AspNetCore.Mvc.Controller class.

Data Passing Techniques

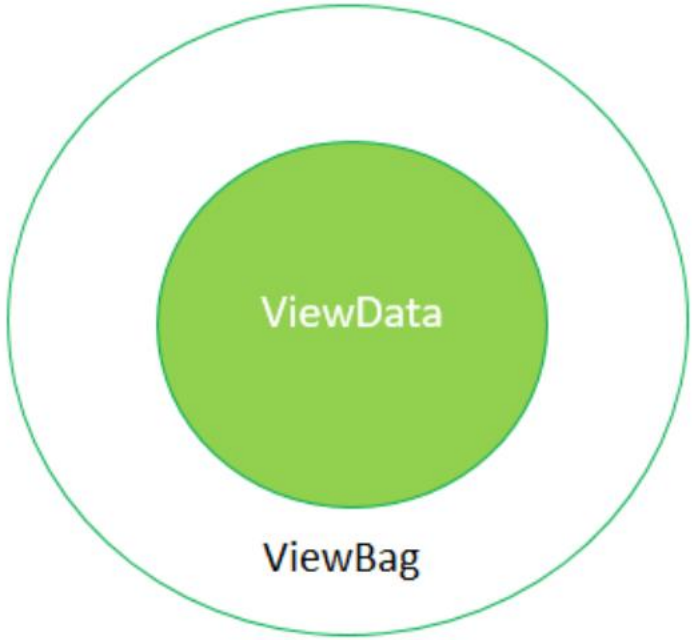
- ViewData
- ViewBag
- TempData
- Session
- QueryString
- Cookies

ViewData

- A dictionary object that stores value in key-value pair.
- Used to pass data from controller to view.
- Need typecasting for getting data in C#.
- Value becomes null If redirection occurs.

ViewBag

- A dynamic property which wraps ViewData.
- Used to pass data from controller to view.
- Don’t need typecasting for getting data in C#.
- Value becomes null If redirection occurs.



ViewData and ViewBag

```
public ActionResult StudentIndex()
{
 List<string>lstStudent = new List<string>();
 lstStudent.Add("Debasis");
 lstStudent.Add("Samrat");
 lstStudent.Add("Rahul");
 ViewData["StudentData"] = lstStudent;
 return View();
}
```

```
<ul>
@foreach (var data in ViewData["StudentData"] as
List<string>)
{
<li>@data</li>
}
</ul>
```

```
public ActionResult Index()
{
 List<string> lstStudent = new
List<string>();
 lstStudent.Add("Debasis");
 lstStudent.Add("Samrat");
 lstStudent.Add("Rahul");
 ViewBag.StudentData = Student;
 return View();
}
```

```
<ul>
@foreach (var student in
ViewBag.StudentData)
{
<li>@student</li>
}
</ul>
```

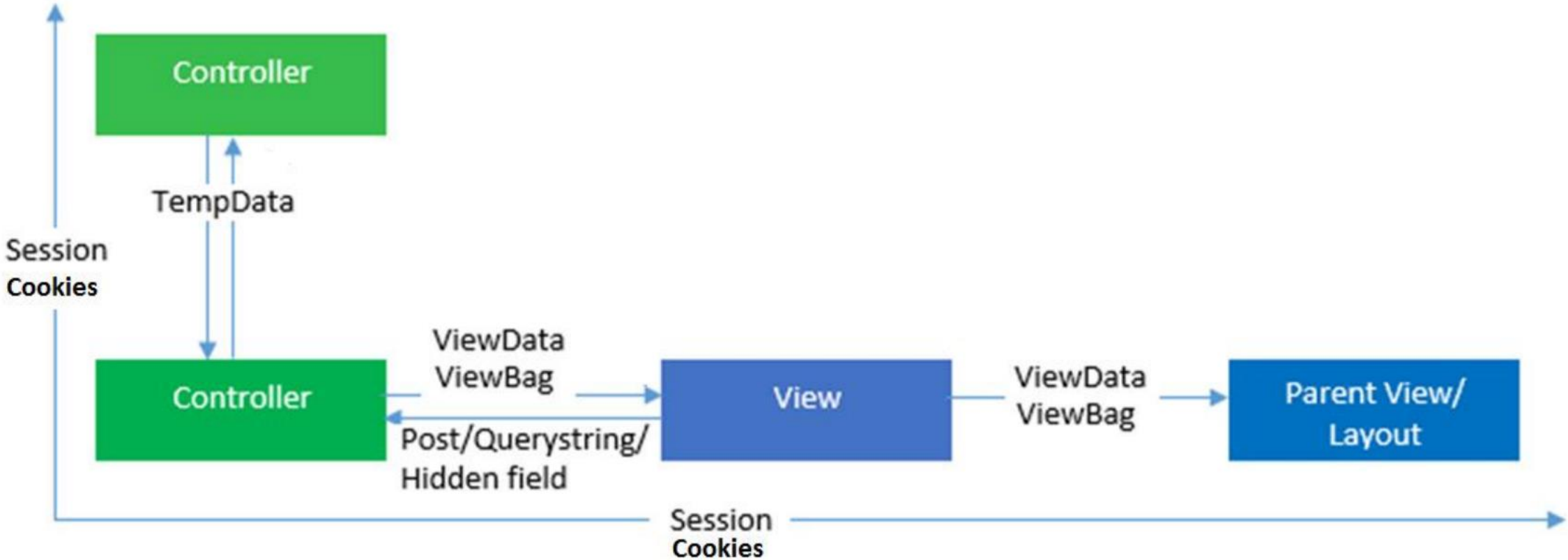
TempData

- A dictionary object that stores value in key-value pair.
- Used to pass data from current request to subsequent request. Need typecasting for getting data in C#.
- Internally use session for storing values till ASP.NET Core 1.x.
- From ASP.NET Core 2.0, the cookie TempData provider is now the default TempData provider means you no longer need to setup session support to make use of the TempData features

```
[HttpPost]
public IActionResult Create(EmployeeModel employeeModel)
{
TempData["Employee"] = JsonSerializer.Serialize(employeeModel);
TempData["Message"]=  "Hello Guys wellcome in my class";
}
```

```
public IActionResult Index()
{
var data = TempData["Employee"];
TempData.Keep("Employee");
var data2 = TempData.Peek("Employee");
EmployeeModel employeeModel = JsonSerializer.Deserialize<EmployeeModel>(data.ToString());
}
```

Data Passing



Session

- Used to pass data within ASP.NET Core MVC app.
- Persist Data for a user session (default 20m).
- Need typecasting for getting data in C#.

```
string msg = "Hi Welcome my class";
HttpContext.Session.SetString("Msg", msg);
HttpContext.Session.SetString("emp", JsonSerializer.Serialize(employeeModel));
```

Cookies

- Used to save data at client side.
- Persistent cookies are stored as a text file on client computer.
- Non-persistent cookies are stored in browser memory.

```
Response.Cookies.Append("non-persistent", "my non persistent cookies");
Response.Cookies.Append("persistent", "my persistent cookies", new CookieOptions { Expires= DateTime.Now.AddDays(1) });
```

QueryString

- Used to pass data within MVC app using parameters in Url.
- Don’t recommended to pass sensitive information.
- Has Url length limitation.

Browser	Length Limitation
IE	2,083
Edge	81578
Chrome	100k
Firefox	100k
Safari	80k