

WORKSHOP DAY4

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TOPICS

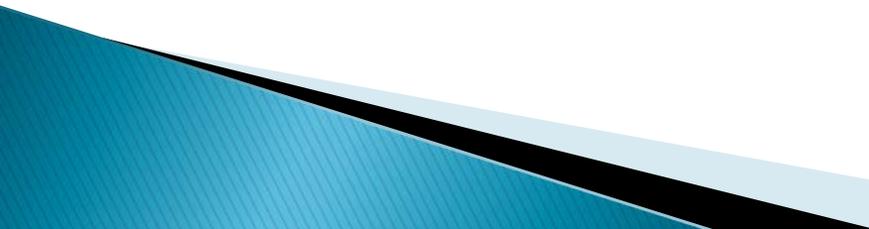
- ▶ ASP.NET Page Life Cycle

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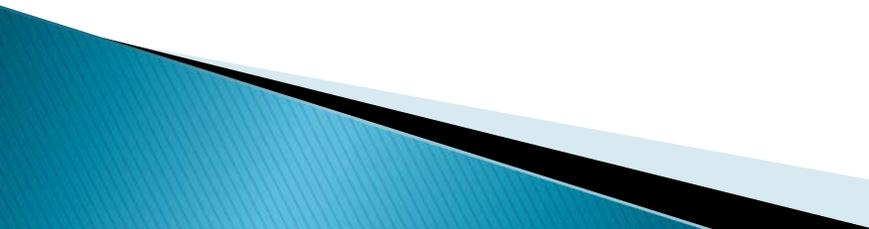
- ▶ When a page is requested, it is loaded into the server memory, processed, and sent to the browser. Then it is unloaded from the memory. At each of these steps, methods and events are available, which could be overridden according to the need of the application. In other words, you can write your own code to override the default code
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ASP.NET Page Life Cycle

The page life cycle phases are:

- ▶ Initialization
 - ▶ Instantiation of the controls on the page
 - ▶ Restoration and maintenance of the state
 - ▶ Execution of the event handler codes
 - ▶ Page rendering
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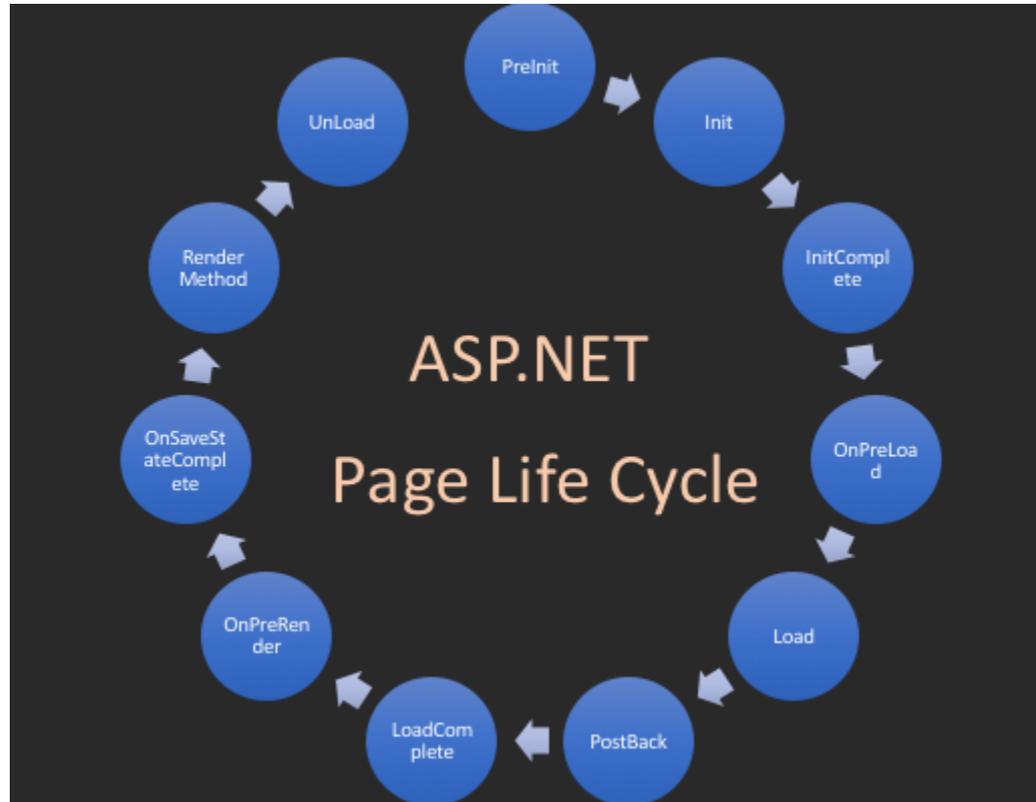
Following are the different stages of an ASP.NET page:

- ▶ **Page request** – When ASP.NET gets a page request, it decides whether to parse and compile the page, or there would be a cached version of the page; accordingly the response is sent.
 - ▶ **Starting of page life cycle** – At this stage, the Request and Response objects are set. If the request is an old request or post back, the IsPostBack property of the page is set to true. The UICulture property of the page is also set.
 - ▶ **Page initialization** – At this stage, the controls on the page are assigned unique ID by setting the UniqueID property and the themes are applied. For a new request, postback data is loaded and the control properties are restored to the view-state values.
 - ▶ **Page load** – At this stage, control properties are set using the view state and control state values.
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- ▶ **Validation** – Validate method of the validation control is called and on its successful execution, the IsValid property of the page is set to true.
 - ▶ **PostBack event handling** – If the request is a postback (old request), the related event handler is invoked.
 - ▶ **Page rendering** – At this stage, view state for the page and all controls are saved. The page calls the Render method for each control and the output of rendering is written to the OutputStream class of the Response property of page.
 - ▶ **Unload** – The rendered page is sent to the client and page properties, such as Response and Request, are unloaded and all cleanup done
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ASP.NET Page Life Cycle Events



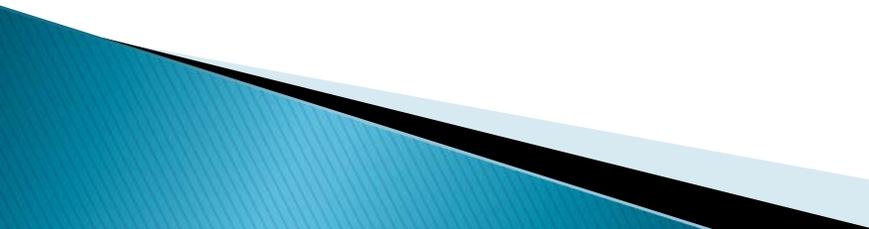
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- ▶ **PreInit** – PreInit is the first event in page life cycle. It checks the IsPostBack property and determines whether the page is a postback. This event can be handled by overloading the OnPreInit method or creating a Page_PreInit handler.
 - ▶ **Init** – Init event initializes the control property and the control tree is built. This event can be handled by overloading the OnInit method or creating a Page_Init handler.
 - ▶ **InitComplete** – InitComplete event allows tracking of view state. All the controls turn on view-state tracking.
 - ▶ **LoadViewState** – LoadViewState event allows loading view state information into the controls.
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- ▶ **LoadPostData** – During this phase, the contents of all the input fields are defined with the <form> tag are processed.
- ▶ **PreLoad** – PreLoad occurs before the post back data is loaded in the controls. This event can be handled by overloading the OnPreLoad method or creating a Page_PreLoad handler.
- ▶ **Load** – The Load event is raised for the page first and then recursively for all child controls. The controls in the control tree are created. This event can be handled by overloading the OnLoad method or creating a Page_Load handler.
- ▶ **LoadComplete** – The loading process is completed, control event handlers are run, and page validation takes place. This event can be handled by overloading the OnLoadComplete method or creating a Page_LoadComplete handler

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- ▶ **PreRender** – The PreRender event occurs just before the output is rendered. By handling this event, pages and controls can perform any updates before the output is rendered.
 - ▶ **PreRenderComplete** – As the PreRender event is recursively fired for all child controls, this event ensures the completion of the pre-rendering phase.
 - ▶ **SaveStateComplete** – State of control on the page is saved.
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- ▶ **UnLoad** – The UnLoad phase is the last phase of the page life cycle. It raises the UnLoad event for all controls recursively and lastly for the page itself.