

The Framework's Basic Life cycle

The framework is built upon a concept of a page life cycle, which is a general concept and not related to ApplinX host applications directly. The life cycle of a page is declared by the top context class:

JSP: `com.sabratec.j2ee.framework.web.GXWebPageContext`.

.NET: `System.Web.UI.Page`

Each page decides which is its class by declaring the root node: `<gx:html`
`gx_context="<CONTEXT_CLASS>"` and closing it with `</gx:html>` as the end tag.

Each dynamic tag should be set with a prefix of "gx:" for example: `<gx:input`
`id="CustomerId"/>`. The `<CONTEXT_CLASS>` is initialized and starts the page Life cycle:

- **gx_onInit (JSP) /OnInit (.NET) :**

Used to initialize page and/or project settings, and register to events. For example setting the ApplinX configuration and registering classes to user exits.

- **gx_onLoad (JSP) /OnLoad (.NET) :**

Used to fill the tags with run-time data from data sources. Host data will be used in lower inheritance level to fill the tags with host data. `Page.IsPostBack (.NET)/ gx_isPostBack (JSP)` can determine if the page is first called, or submitted back to itself.

- **Post back:**

Performed automatically by the framework. Each page is submitted to itself using server side buttons/links:

JSP:

```
<gx:input id= myBtn onserverclick= <FUNC_NAME> />
<gx:a id= myLinkBtn onserverclick= <FUNC_NAME> >Send</a>
```

.NET:

```
<input id="myBtn" runat="server" onserverclick="< FUNC_NAME>" />
<a id="myLinkBtn" runat="server" onserverclick="<FUNC_NAME>">Send</a>
```

The `<FUNC_NAME>` will be activated automatically upon a user click, and it will be used to perform update actions, re-queries or jumping to another page using redirect. In the context class the developer should hold a function in the format:

```
Public void <SERVER_FUNC>(){
    // code in response to the server click event.
}
```

Can be also fired using JavaScript using: `gx_postBack("<SERVER_FUNC>")` ;

```
public void <SERVER_FUNC>(Object sender,EventArgs e){
    // code in response to the server click event.
}
```

In JSP the event can also be fired using JavaScript: `gx_postBack ("<SERVER_FUNC>") ;`

- **gx_preRender (JSP) / PreRender event (.NET):**

Used to add logic after any post back event for example: refilling the page.

- **Controls/Tags rendering:**

The dynamic tags are rendered with runtime content and attributes manipulation performed by the tagsAccessor in the previous stages of the life cycle.

- **gx_onUnload(JSP)/OnUnload (.NET):**

Occurs when the page ends. Used to release any relevant resources.

- **gx_onError (JSP)/Error event (.NET):**

Used for capturing errors. Any known thrown or runtime error is captured and can be analyzed by the developer.