

API Element Plugin

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Usages

- **API Element Plugin** is used as an extension of functions on top of the default API elements available in the API Builder.
- This plugin type must extend `org.joget.api.model.ApiPluginAbstract` abstract class.

POM file adjustments

- Add the project dependency below:

```
<!-- Add apibuilder_api dependency -->
<dependency>
  <groupId>org.joget.api</groupId>
  <artifactId>apibuilder_api</artifactId>
  <version>${project.version}</version>
  <scope>provided</scope>
</dependency>
```

Abstract Class


`org.joget.api.model.ApiPluginAbstract`

- Under `apibuilder_api` module
- Extended `org.joget.plugin.base.ExtDefaultPlugin`. Please refer to [Plugin Base Abstract Class and Interface](#).
- Implemented `org.joget.api.model.ApiPlugin`.
- A base abstract class to develop a custom API Element Plugin.

API Methods


To generate JSON APIs from your implementation, see the available Java annotations with samples below:

`@Operation`


Variable	Data Type	Mandatory	Description
path	String		<p>API path name to call the method. Always start with a forward slash (/).</p> <p>To include path parameters, after annotating @Param with the method parameter (see doc below), you can add the variable enclosed within curly braces into the path.</p> <p>Example:</p> <pre> /getUserDetails /getUserDetails/{username} </pre>
type	enum		<p>Defines the request method type.</p> <p>Available types:</p> <ul style="list-style-type: none"> • Operation.MethodType.GET • Operation.MethodType.POST • Operation.MethodType.PUT • Operation.MethodType.DELETE <p>Default value when undefined is Operation.MethodType.POST.</p>
summary	String		<p>Provides a brief description of this operation. This is the value to display as the method name in the API Builder.</p> <p>Recommended to be 120 characters or less for proper visibility when previewing API.</p> <p>Default value when undefined is a blank string.</p>
description	String		<p>A verbose description of the operation.</p> <p>Default value when undefined is a blank string.</p>
deprecated	boolean		<p>Allows an operation to be marked as deprecated.</p> <p>Default value when undefined is <i>false</i>.</p>

@Responses

Consists of @Response annotation(s). Information in table here:

Variable	Data Type	Mandatory	Description
responseCode	int		<p>The HTTP response code.</p> <p>Example value:</p> <pre>200</pre>
description	String		<p>A short description of the response.</p> <p>Default value when undefined is a blank string.</p>
definition	String		<p>A definition to the data schema in response.</p> <p>Default value when undefined is a blank string.</p>
dataClass	String		<p>A class to the data in response.</p> <p>Default value when undefined is a blank string.</p>
contentType	String		<p>A content type of the data in response.</p> <p>Default value when undefined is "application/json".</p>
array	boolean		<p>Defines if this response value is an array.</p> <p>Default value when undefined is <i>false</i>.</p>

@Param

Variable	Data Type	Mandatory	Description
value	String		A short name of the parameter. Example value: <input type="text" value="username"/>
required	boolean		Defines if this parameter value is mandatory. Default value when undefined is true.
description	String		A verbose description of the parameter. Default value when undefined is a blank string.
definition	String		The key of definition provided by ApiPlugin. Example value: <input type="text" value="ApiResponse"/> Default value when undefined is a blank string.
header	boolean		Defines if this parameter value is in the request header. Default value when undefined is false.

For detailed examples, do check out the [Sample Plugins](#) attached in this page.

Here is a sample code snippet from the sample Basic Current User API plugin:

```

@Operation(
    path = "/getUserDetails",
    type = Operation.MethodType.GET,
    summary = "Get user details",
    description = "Get user details via username, else get current user."
)
@Responses({
    @Response(responseCode = 200, description = "Success", definition = "User"),
    @Response(responseCode = 404, description = "User data not found", definition = "ApiResponse")
})
public ApiResponse getUserDetails(
    @Param(value = "username", required = false, description = "Username of user.") String username) {
    ExtDirectoryManager dm = (ExtDirectoryManager) AppUtil.getApplicationContext().getBean
("directoryManager");
    User user = dm.getUserByUsername(username);
    WorkflowUserManager wum = (WorkflowUserManager) AppUtil.getApplicationContext().getBean
("workflowUserManager");
    User currentUser = wum.getCurrentUser();
    if (user != null) {
        return new ApiResponse(200, user, getFields());
    } else if (user == null && currentUser != null) {
        return new ApiResponse(200, currentUser, getFields());
    } else {
        return new ApiResponse(404, AppPluginUtil.getMessage("BasicCurrentUserAPI.resp.404", getClassName(),
getResourceBundlePath()));
    }
}

```

Abstract Methods

setIcon

```
public String getIcon()
```

Return the icon to show for this API Element in the API Builder palette.

getTag

```
public String getTag()
```

Return a unique tag for the API Document.

Overridable Methods

getTagDesc

```
public String getTagDesc();
```

Return a tag description for API Document.

Default will return the value found in `getLabel()` method in your custom plugin.

getResourceBundlePath

```
public String getResourceBundlePath();
```

Return a resource bundle path for API document generation.

Default value is NULL.

getExternalDocsDesc

```
public String getExternalDocsDesc();
```

Return a short description for external document for API document.

Default value is NULL.

getExternalDocsURL

```
public String getExternalDocsURL();
```

Return a link for external document for API document generation.

Default value is NULL.

getDefinitions

```
public Map<String, ApiDefinition> getDefinitions();
```

Return a key & JSON Definition map for API document generation.

Default value is NULL.

isAPIEnabled

```
public Boolean isAPIEnabled(String method, String path);
```

Check if an API path is enabled for the API Key.

Default behavior will check if method exist in the specified path, in the property string "ENABLED_PATHS".

getOperationOptions

```
public Map<String, String> getOperationOptions();
```

Return a map of available operations (GET, POST, PUT, DELETE) to populate in builder.

usingSimpleConfig

```
public boolean usingSimpleConfig();
```

A flag to indicate using simplified plugin configuration method.

Default value is TRUE.

Plugin Properties Options

Please refer to [Plugin Properties Options](#) for more information.

Sample Plugins

Basic Current User API

[basic-current-user.zip](#)

Sample API with property options

[apibuilder_sample_plugin.zip](#)