

Your First APEX Plugin

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Agenda

1. Target Audience
2. Getting Started
3. Primary Concepts
4. Walkthrough #1: Region plugin
5. Walkthrough #2: Item plugin
6. Links to Resources





Target Audience

- Building APEX applications
- Comfortable with:
 - PL/SQL
 - HTML
- Gaining familiarity:
 - jQuery
 - Javascript





Getting started

- plugins on **apex.world**
- plugins in the **Sample Database Application**





Primary concepts

- Plugin types
- Plugin PL/SQL and Callbacks
- Standard & Custom Attributes
- Files, JS and CSS
- Plugin Events



Plugin Types

Authentication Scheme Type

Authorization Scheme Type

Dynamic Action

Item

Process

Region

PL/SQL Callbacks

PL/SQL Code ?

```
1 function render
2   (p_region in apex_plugin.t_region
3   ,p_plugin in apex_plugin.t_plugin
4   ,p_is_printer_friendly in boolean
5   ) return apex_plugin.t_region_render_result is
6 begin
7   ...
8 end render;
9
10 function ajax
11   (p_region in apex_plugin.t_region
12   ,p_plugin in apex_plugin.t_plugin
13   ) return apex_plugin.t_region_ajax_result is
14 begin
15   ....
16 end ajax;
```

Callbacks

Render Procedure/Function Name

AJAX Procedure/Function Name

Custom Attributes Add Attribute

Substitute Attribute Values Yes No ?

| Label | Scope ↑≡ | Attribute | Sequence | Type | Required | Default Value | Depending on |
|---------------------------------|-------------|-----------|----------|-------------|----------|---------------|--------------|
| Google API Key | Application | 1 | 10 | Text | Yes | | |
| No Address Results message | Application | 2 | 20 | Text | No | | |
| Directions Not Found message | Application | 3 | 30 | Text | No | | |
| Directions Zero Results message | Application | 4 | 40 | Text | No | | |
| Min. Zoom | Application | 5 | 50 | Integer | No | 1 | |
| Max. Zoom | Application | 6 | 60 | Integer | No | | |
| Maximum Records | Application | 7 | 70 | Integer | Yes | 10000 | |
| Min. Map Height | Component | 1 | 10 | Number | Yes | 400 | |
| Visualisation | Component | 2 | 20 | Select List | Yes | PINS | |
| Zoom Level on Click | Component | 3 | 30 | Integer | No | 13 | |

Custom Attributes

up to **15** Application Attributes

– set in Component Settings

up to **25** Component Attributes

– set separately for each region / item / etc.

Files, JS, CSS

Files

File Prefix ?

No Files found.

File URLs to Load

Cascading Style Sheet ?

```
#PLUGIN_FILES#com_oracle_apex_html5_bar_chart#MIN#.css
```

JavaScript ?

```
#PLUGIN_FILES#com_oracle_apex_html5_bar_chart#MIN#.js
```

Events

| <input type="checkbox"/> | Name ↑≡ | Internal Name |
|--------------------------|----------------------|----------------------|
| <input type="checkbox"/> | validationError | validationerror |
| <input type="checkbox"/> | validationInProgress | validationinprogress |
| <input type="checkbox"/> | validationSuccess | validationsuccess |

Plugin Events



basic plugin

List All The Things

BLAKE KING FORD CLARK JAMES WARD TURNER SCOTT ADAMS MARTIN MILLER SMITH
JONES ALLEN

Refresh

Walkthrough #1: Region plugin



demo trello plugin

trello card

The screenshot shows a Trello card interface. At the top, there's a header 'trello card'. Below it is a large image of the Trello logo. Underneath the logo is a green 'Intro' button followed by the text 'What is Trello?'. Below that is a smaller image with the text 'Presenting Trello: Said'. At the bottom of the card, there are two buttons: 'Watch' and 'Join'. Below these is a comment section with a profile picture, a text input field labeled 'Write a comment', and a 'Trello' logo.

Walkthrough #2: Item plugin



Resources

- Oracle documentation: Implementing Plugins
<https://docs.oracle.com/en/database/oracle/application-express/19.1/htmldb/implementing-plug-ins.html#GUID-B158814B-C3FC-4030-AF25-D14208DB1E27>
tinyurl.com/plugindoc
- APEX PL/SQL API
apex.oracle.com/api
- APEX Javascript API
apex.oracle.com/jsapi
- Plugin Templates
- repository maintained by Daniel Hochleitner
github.com/DanizlSun/apex-plugin-templates
- Published plugins
apex.world



Get the slides /
walkthrough
steps

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... within the next week