

Issue #16796

Add Checkboxes to Legend Controlling Subplot Visibility

Feature Description

The feature is being able to initialize the legend with the ability to add interactive checkboxes that turn the visibility of the subplots on/off. Users can add the interactive checkboxes to the legend by setting an argument to true when they initialize the legend in their code. The optional parameter is set to False by default. In the interactive checkboxes, clicking them will toggle the visibility of their respective elements on/off.

Implementation Plan

Code Organization

- legend.py
 - In the initialization function, we will add an argument with the default parameter set to False, then if the user sets that parameter as True then the checkboxes should appear in the legend.
 - For every entry, it will need to initialize each checkbox. This will be done in the initialization method.
- checkbox.py (New File)
 - This will be the GUI element objects for the checkboxes. One instance is created for every entry and will save its own state on/off, and it will know which object it is referencing and will store its own event handler, cid, so if the entry is deleted, the event can also be deleted.
 - It will inherit from Artist.
 - In the init function, an event handler will be created to respond to the users clicking on the checkbox.
 - Calls the respective set visibility methods of the artist elements.

UML:

