

Demo And Installation – For Python

Table of Contents

PYTHON ENVIRONMENT	2
INSTALLING PACKAGES ON SPYDER BY ANACONDA.....	2
DEMOS	4
Nonparametric Demos.....	4
Parametric Demos	5

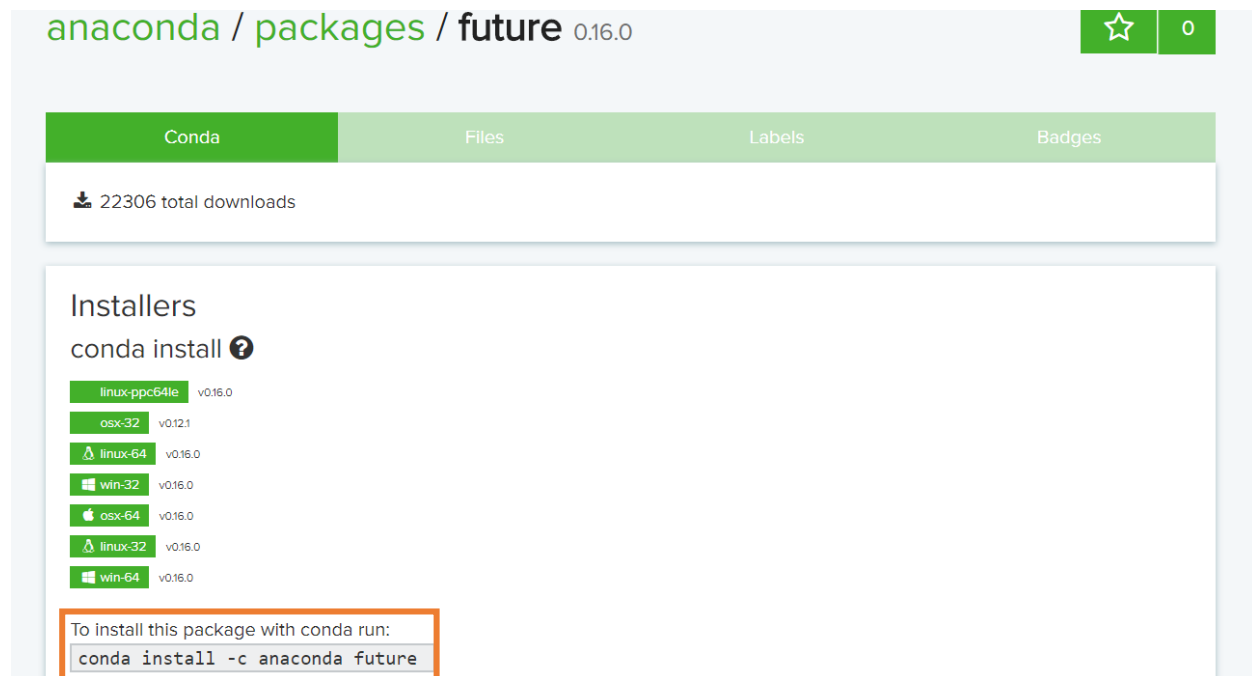
PYTHON ENVIRONMENT

We recommend using the Spyder Python environment from Anaconda for running the samples inside 'python demo', but any Python environment that supports **Matplotlib** and **Tkinter** can be used. The following packages should also be installed in your Python environment, as the sortal library requires them:

1. mpmath: <http://mpmath.org/doc/current/setup.html>
2. future: <http://python-future.org/quickstart.html>
3. enum: <https://pypi.python.org/pypi/enum34>

INSTALLING PACKAGES ON SPYDER BY ANACONDA

To install these packages on Spyder via Anaconda, search for the package of interest on the [Anaconda Cloud](#) website. After checking for the compatibility of the package with your computer, refer to the line of code in the **orange** box below:



anaconda / packages / future 0.16.0

22306 total downloads

Installers

conda install ?

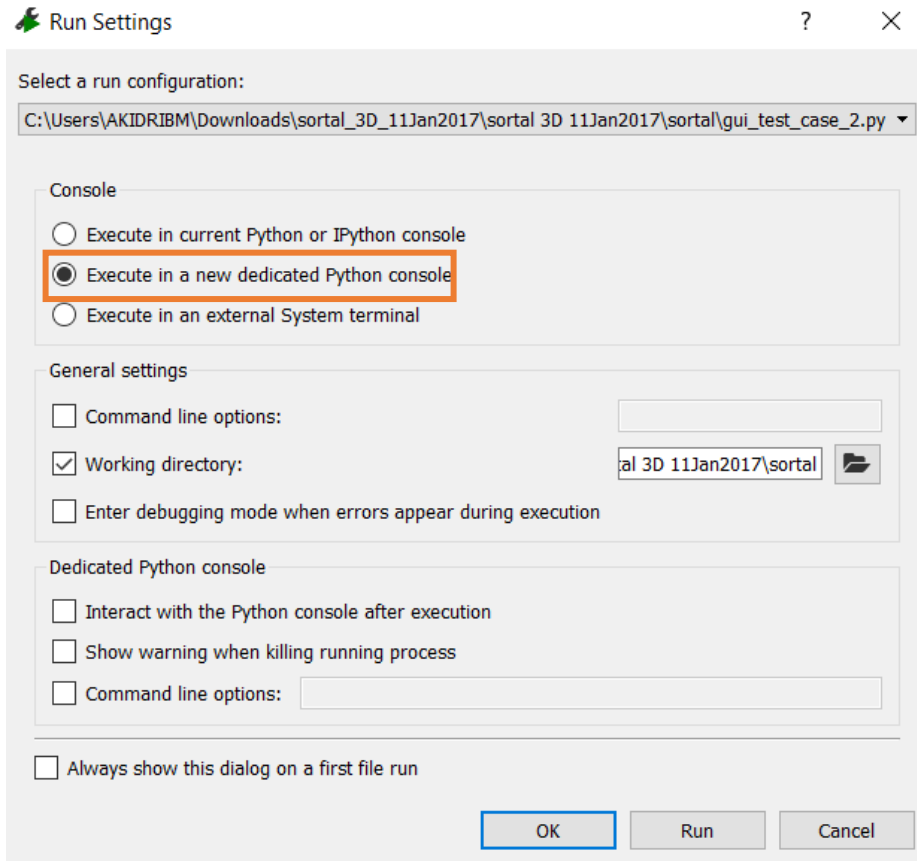
- linux-ppc64le v0.16.0
- osx-32 v0.12.1
- linux-64 v0.16.0
- win-32 v0.16.0
- osx-64 v0.16.0
- linux-32 v0.16.0
- win-64 v0.16.0

To install this package with conda run:

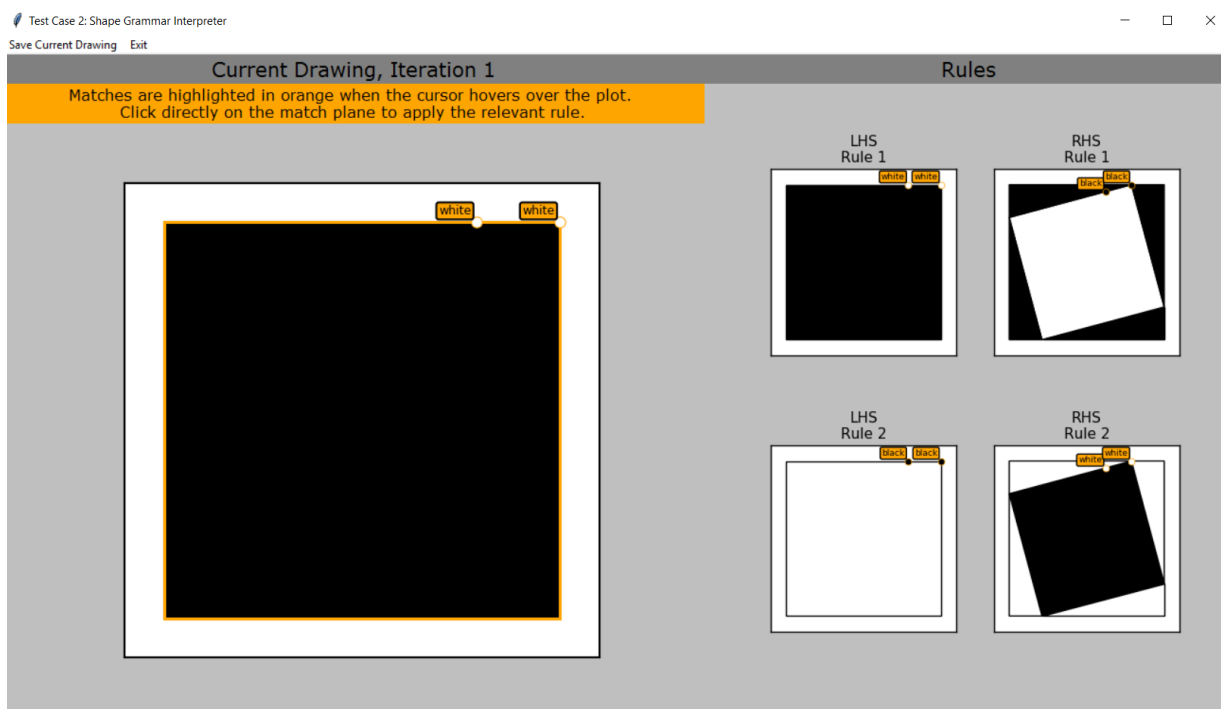
```
conda install -c anaconda future
```

Open the Anaconda Prompt window and paste this line of code starting with '**conda** ...' into the window. It will perform the installation of the package onto Spyder.

Next, open any of the .py files beginning with 'gui' in the Python environment. Run the code in its own Python console; for example, in Anaconda as shown on the next page.



The message '<<<< GENERATING APPLICATION WINDOW >>>>' will be printed in the console window before a Tkinter Application Window pops up, as shown below.



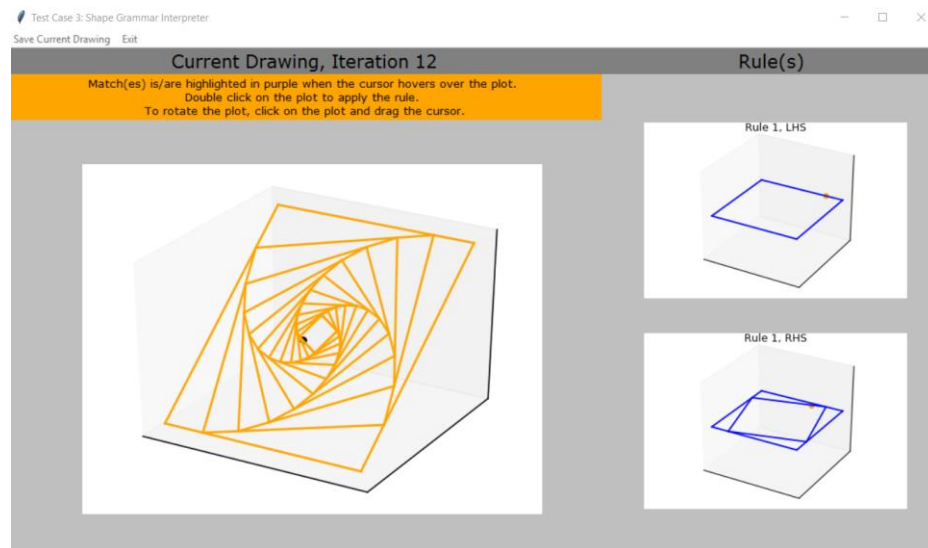
DEMOS

There are five demo scripts to choose from inside 'python demo'. Both nonparametric and parametric sides of the library are built into 'sortal'.

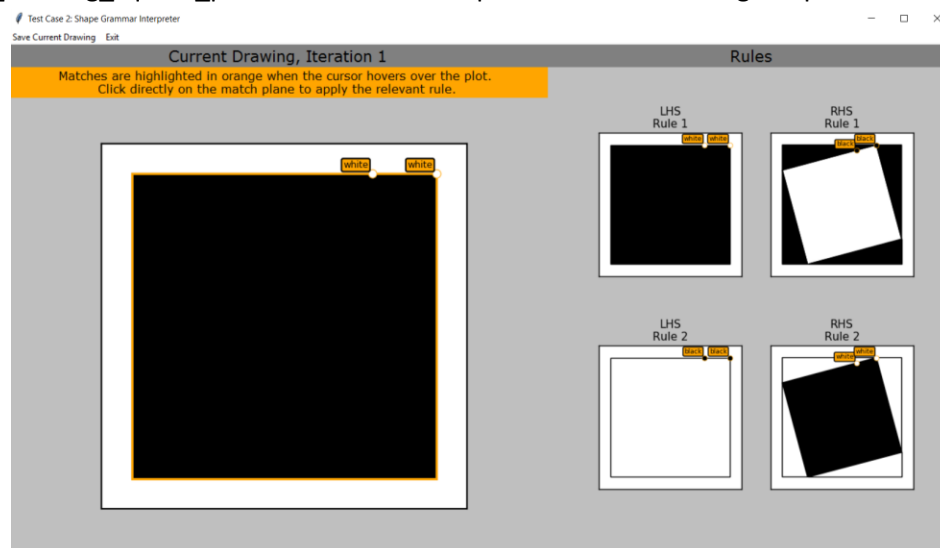
Nonparametric Demos

The following three demo scripts focus on the nonparametric part of the library:

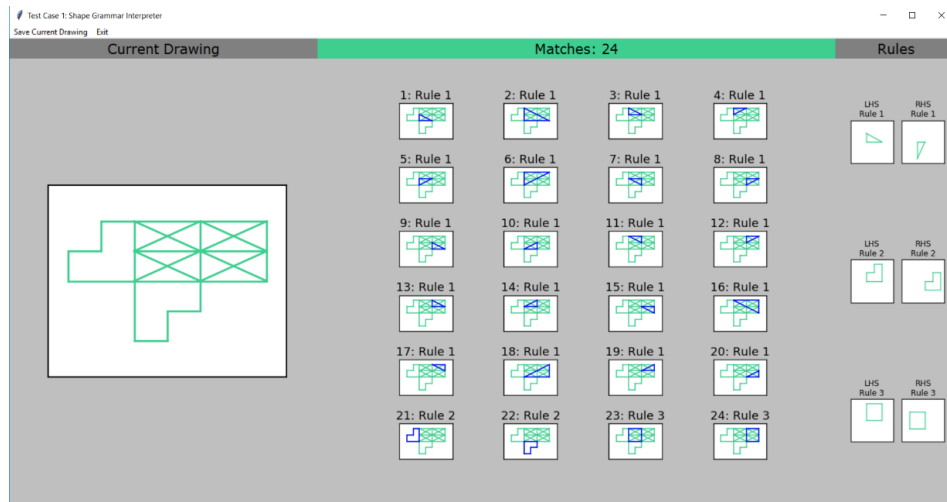
1. `gui_3D_rotating_square` – shows 3D capabilities of nonparametric sort types



2. `gui_3D_rotating_square_planes` – shows use of planes and labels using nonparametric sorts



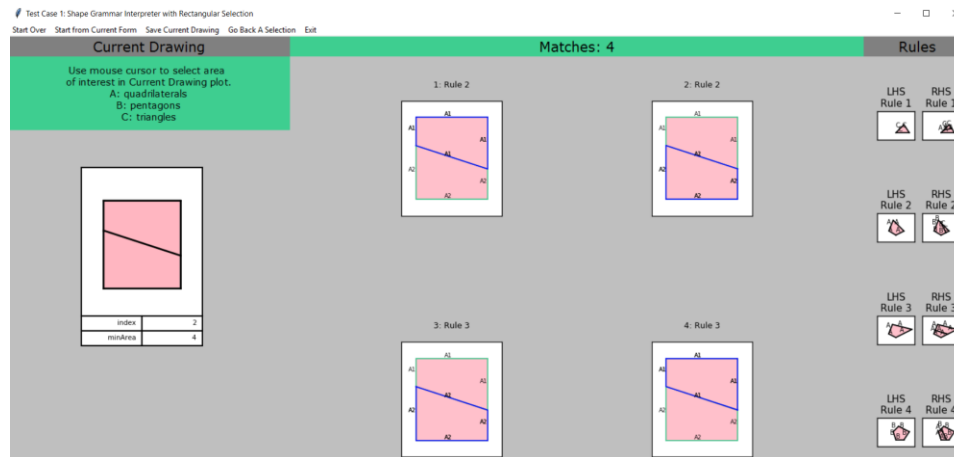
- gui_3D_polygon_selection – shows nonparametric match and result generation using a complex 2D initial shape



Parametric Demos

The other two scripts focus on the parametric part of the library:

- gui_parametric_selection_w_labels – shows rule definition (inside 'sdl_files' -> 'parametric_ice_ray'), match and result generation with parametric sorts, predicates and directives; description labels are **visible** in this demo



2. `gui_parametric_selection_no_labels` – uses the same initial shape and rules to show rule definition, match and result generation with parametric sorts, predicates and directives; description labels are **not visible** in this demo

