**OpenAlea and Adel Wheat Installation:**

Prerequisites:

1. Install anaconda.
2. working with virtual environments
3. Using Anaconda prompt

Steps:

The following command creates an openalea environment and installs the following packages

1. openalea.plantgl
2. openalea.lpy
3. openalea.mtg
4. pyglviewer

from any of the channels openalea, anaconda, openalea/label/unstable

conda create -n openalea openalea.plantgl openalea.lpy openalea.mtg pyqglviewer boost=1.66 -c openalea -c anaconda -c openalea/label/unstable

if virtual environment(openalea) is not activated run the command

conda activate openalea

**Installing Adel wheat:**

Note: we are creating a new environment for Adel wheat just to avoid any unforeseen errors in openalea environment.

Step 1: Clone openalea environment to new adel environment

conda create --name adel --clone openalea

For references <https://docs.conda.io/projects/conda/en/latest/user-guide/tasks/manage-environments.html>

If adel is environment is not activated run the command:

conda activate adel

Step2: clone or download package from github

<https://github.com/openalea-incubator/adel>

How to do : 1) Click on the link and navigate to the repository webpage.

2) click on clone or download button in webpage (looks like 🡪 )

3) extract the downloaded zip file into current working directory.

Step 4 : Installing few packages (run in cmd prompt or anaconda prompt)

conda install -c conda-forge rpy2

conda install -c anaconda -c openalea openalea.mtg openalea.visualea openalea.core openalea.components numpy scipy matplotlib pandas pil

python setup.py develop

For references or source : <https://github.com/openalea-incubator/adel/blob/master/README.rst>

Sample Exercises After Installing Openalea:

1. Try to Plot a tree graph using an Lsystem
2. Understand the terms like Axiom, produce, homomorphism and how to read an Lsystem

Sample exercise after Installing ADEL:

Click python in anaconda command prompt then it loads python interpreter.

1)Run the following commands one by one in python Interpreter to plot a 3d scene

**from** **alinea.adel.astk\_interface** **import** AdelWheat

adel = AdelWheat(nplants=2, aspect='line')

g.display(max\_scale=1)

adel.plot(g)

Pass different arguments for nplants and aspect line to observe different types of scene in 3d viewer

NOTES:

**For view package references** **and commands to install package** :

anaconda.org and type required package in the search the package name to find conda installation commands.

**Information about setup.py:**

<https://stackoverflow.com/questions/1471994/what-is-setup-py>