

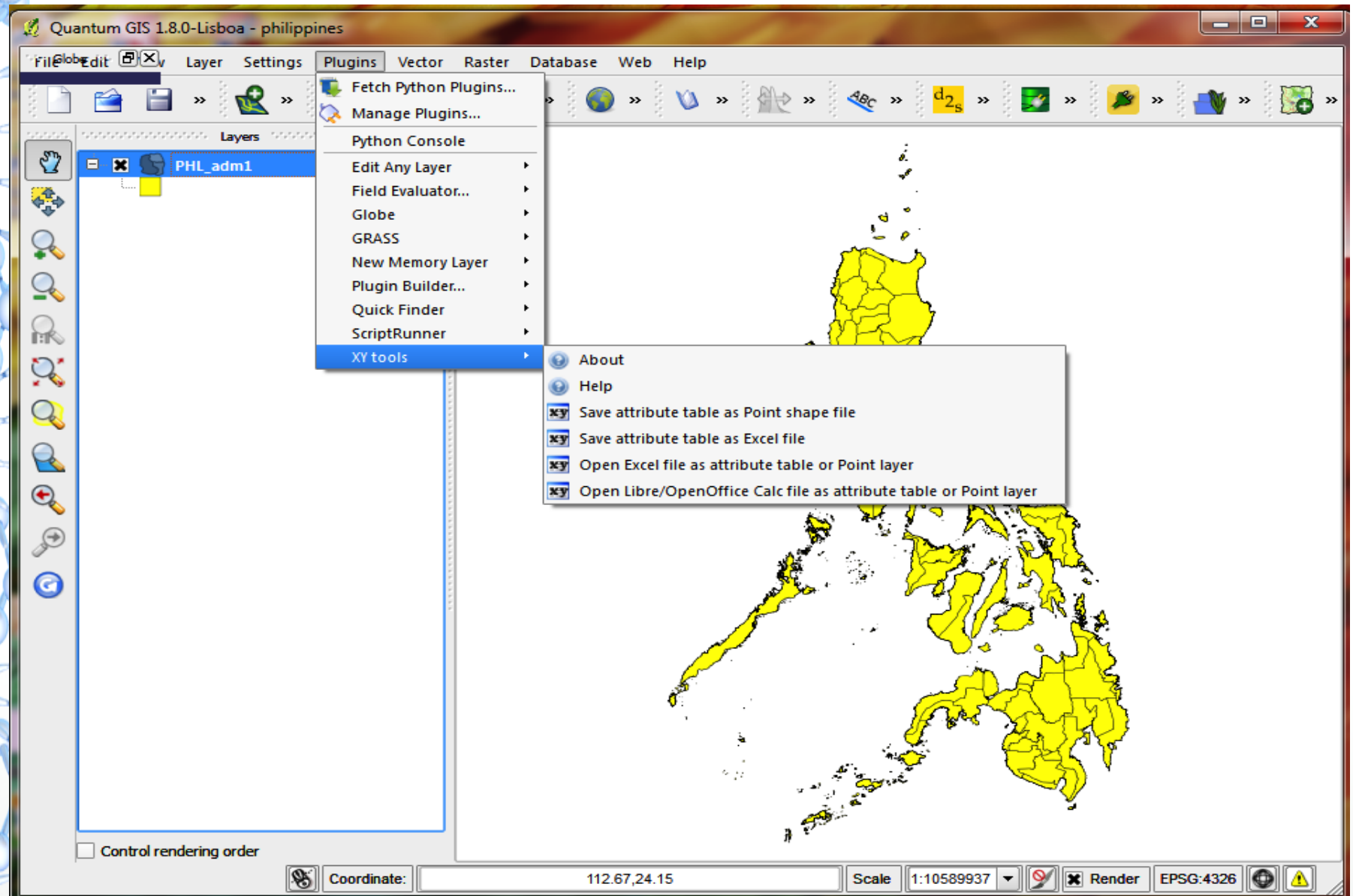


Geoprocessing with Python

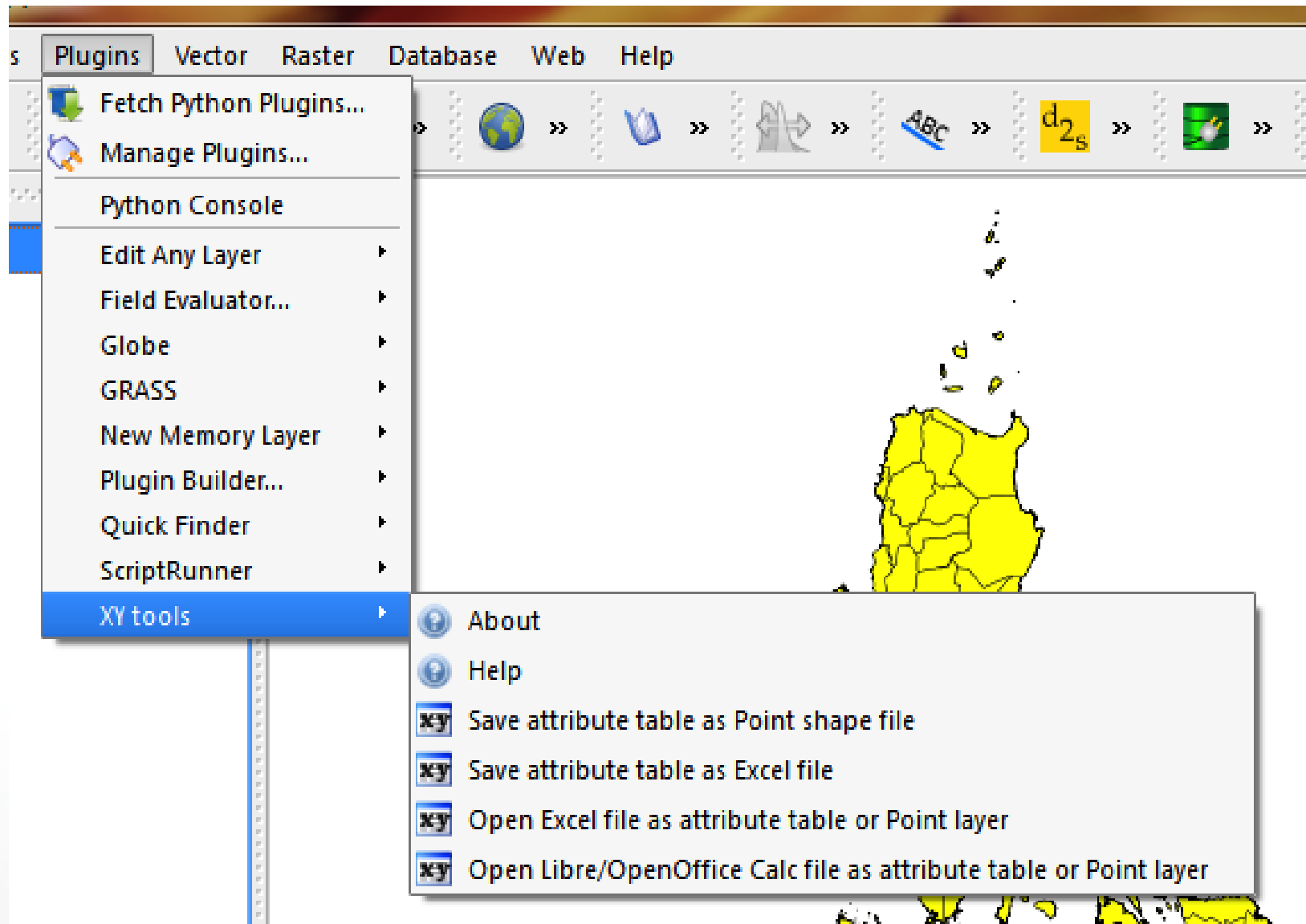
- QGIS and Python Console
- Running Python Script in QGIS
 - PyQGIS

Wilfredo M. Rada

QGIS Interface



QGIS Plugins Menu

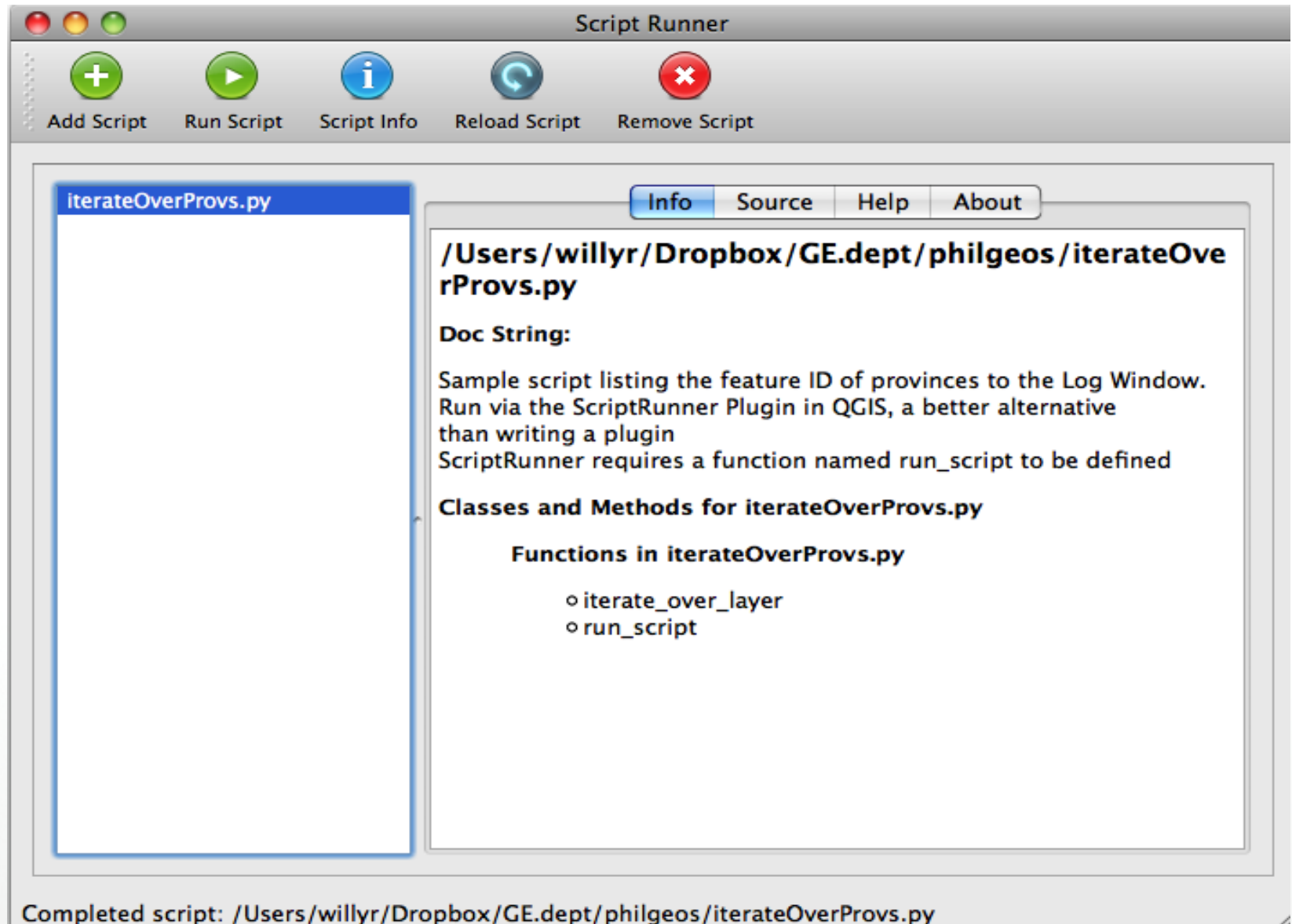




What can We do with Plugins Menu

1. *Fetch Plugins* – Find and install published plugins from the QGIS Plugins Repository.
2. *Manage Plugins* – enable or disable installed plugins.
3. *Python console* – open a Python window and run python commands e.g., to process the layers in the QGIS project.
4. *Run plugins* by clicking.

Script Runner Plugin





Sample Python Script

```
"""
Sample script listing the feature ID of provinces to the Messages Log Window.
Run via the ScriptRunner Plugin in QGIS, a better alternative
than writing a plugin
ScriptRunner requires a function named run_script to be defined
"""

import qgis.core as qc

def run_script(iface):
    """
    the required function by Scrip Runner plugin
    """
    iterate_over_layer(iface)

def iterate_over_layer(iface):
    """
    the called function
    """

    # get the active layer
    vlayer = iface.activeLayer()

    if vlayer == None:
        qc.QgsMessageLog.logMessage("No Active (selected) Layer")
        return

    provider = vlayer.dataProvider()
    feat = qc.QgsFeature()

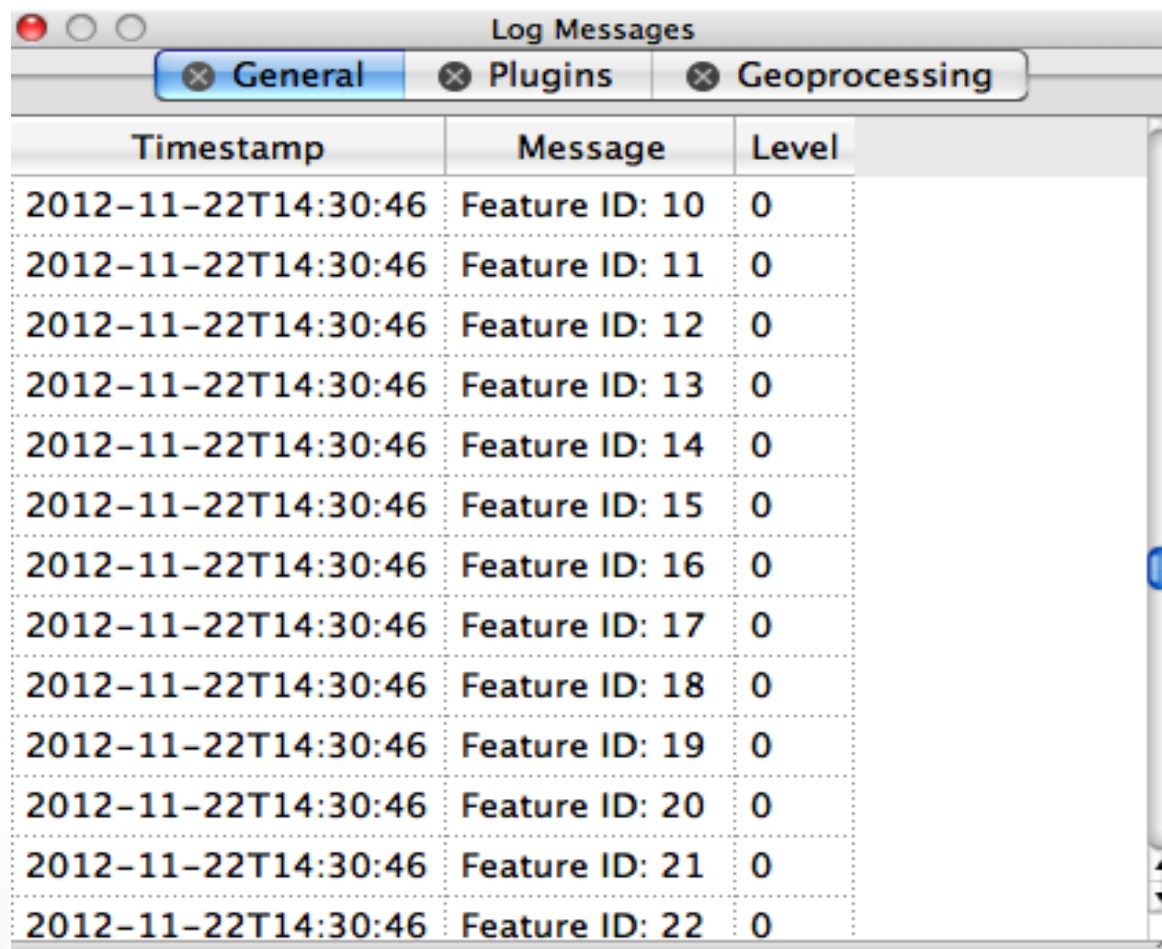
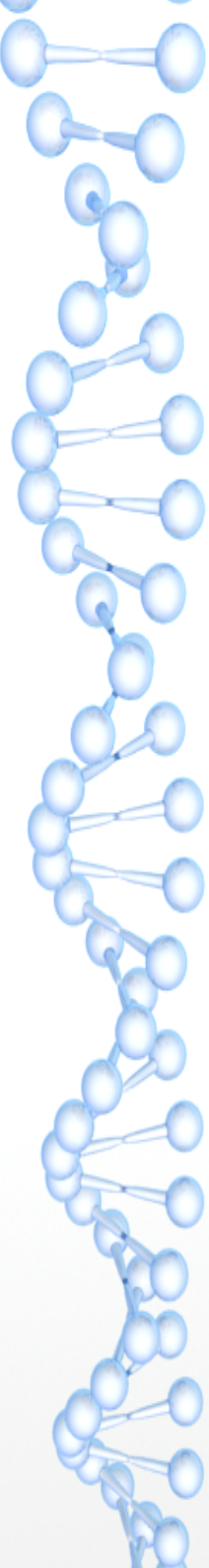
    allAttrs = provider.attributeIndexes()

    # start data retrieval:
    # fetch geometry and all attributes for each feature
    provider.select(allAttrs) # retrieve every feature with its geometry and attributes

    qc.QgsMessageLog.logMessage("Processed Features ----- ")
    while provider.nextFeature(feat):

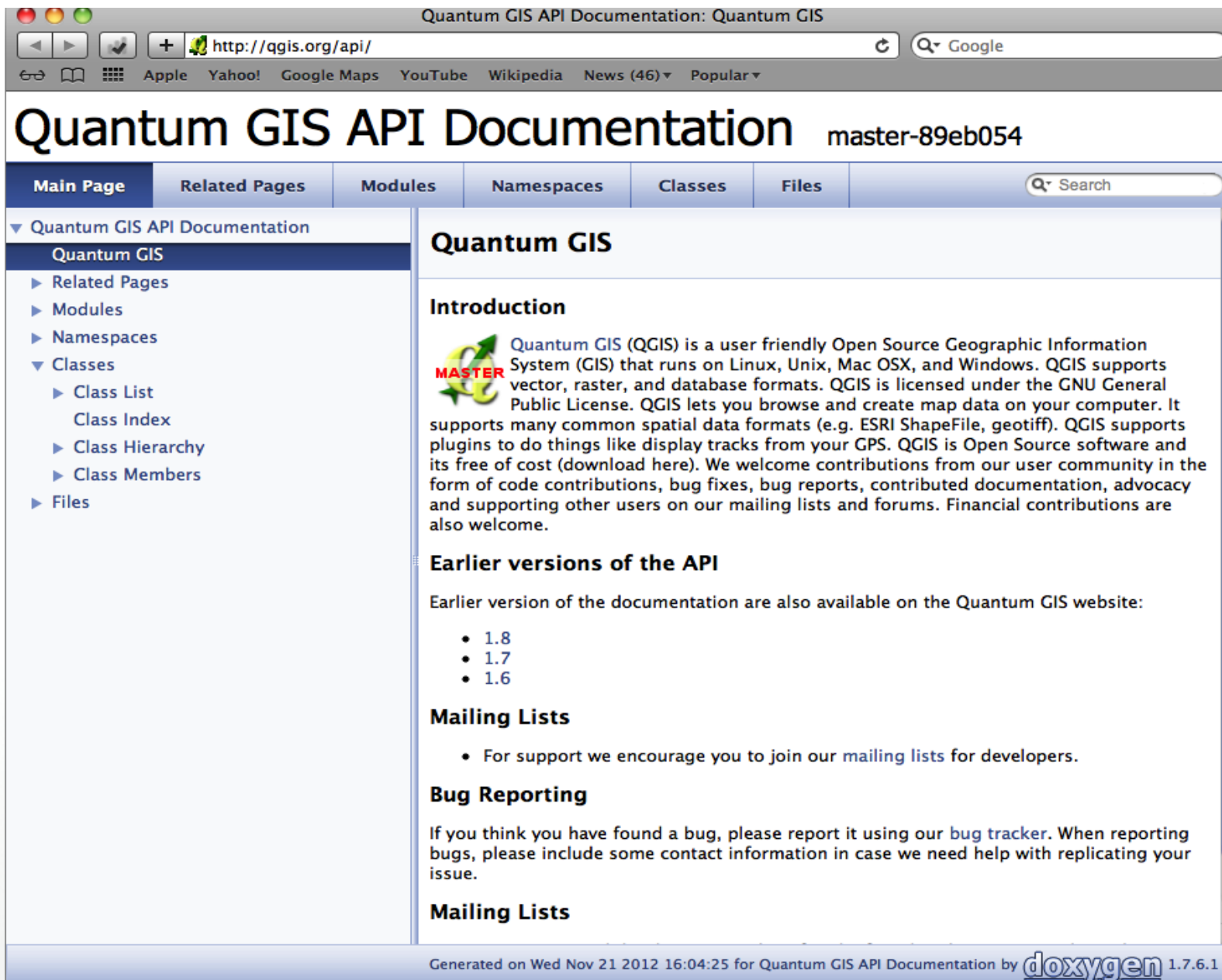
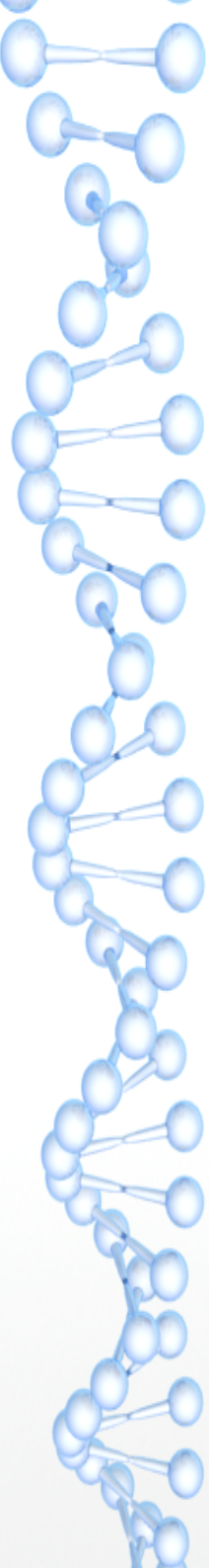
        msg = "Feature ID: %d " % feat.id()
        qc.QgsMessageLog.logMessage(msg)
    del vlayer
```

Output



Timestamp	Message	Level
2012-11-22T14:30:46	Feature ID: 10	0
2012-11-22T14:30:46	Feature ID: 11	0
2012-11-22T14:30:46	Feature ID: 12	0
2012-11-22T14:30:46	Feature ID: 13	0
2012-11-22T14:30:46	Feature ID: 14	0
2012-11-22T14:30:46	Feature ID: 15	0
2012-11-22T14:30:46	Feature ID: 16	0
2012-11-22T14:30:46	Feature ID: 17	0
2012-11-22T14:30:46	Feature ID: 18	0
2012-11-22T14:30:46	Feature ID: 19	0
2012-11-22T14:30:46	Feature ID: 20	0
2012-11-22T14:30:46	Feature ID: 21	0
2012-11-22T14:30:46	Feature ID: 22	0

QGIS API Documentation



Quantum GIS API Documentation: Quantum GIS

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Quantum GIS

Introduction

 Quantum GIS (QGIS) is a user friendly Open Source Geographic Information System (GIS) that runs on Linux, Unix, Mac OSX, and Windows. QGIS supports vector, raster, and database formats. QGIS is licensed under the GNU General Public License. QGIS lets you browse and create map data on your computer. It supports many common spatial data formats (e.g. ESRI ShapeFile, geotiff). QGIS supports plugins to do things like display tracks from your GPS. QGIS is Open Source software and its free of cost (download here). We welcome contributions from our user community in the form of code contributions, bug fixes, bug reports, contributed documentation, advocacy and supporting other users on our mailing lists and forums. Financial contributions are also welcome.

Earlier versions of the API

Earlier version of the documentation are also available on the Quantum GIS website:

- 1.8
- 1.7
- 1.6

Mailing Lists

- For support we encourage you to join our [mailing lists](#) for developers.

Bug Reporting

If you think you have found a bug, please report it using our [bug tracker](#). When reporting bugs, please include some contact information in case we need help with replicating your issue.

Mailing Lists

Generated on Wed Nov 21 2012 16:04:25 for Quantum GIS API Documentation by [doxygen](#) 1.7.6.1

PyQGIS Developer Cookbook



The screenshot shows a web browser window with the title "PyQGIS Developer Cookbook — PyQGIS documentation". The address bar shows the URL "http://www.qgis.org/pyqgis-cookbook/". The browser's search bar contains "PyQGIS". Below the browser window, the page content is displayed. On the left, there is a dark blue sidebar with the following sections: "PyQGIS documentation »" with a "next | index" link; "Table Of Contents" with links to "PyQGIS Developer Cookbook" and "Indices and tables"; "Next topic" with a link to "Introduction"; "This Page" with a link to "Show Source"; and "Quick search" with a search input field and a "Go" button. The main content area has the title "PyQGIS Developer Cookbook" and a "Contents:" section with a bulleted list of topics.

PyQGIS documentation » [next | index](#)

PyQGIS Developer Cookbook

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