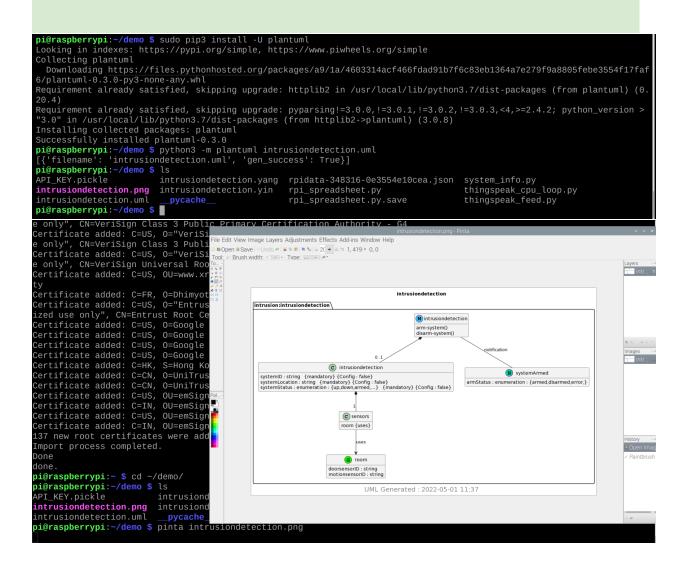# Lab 9 — YANG

- Study the GitHub [repository](#) Lesson 9
- Install pyang and PlantUML
- copy ~/iot/lesson9/intrusiondetection.yang to ~/demo
- Run pyang to generate intrusiondetection.yin and intrusiondetection.uml
- Run PlantUML to generate intrusiondetection.png

```
pi@raspberrypi:~/demo $ sudo pip3 install -U plantuml
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Collecting plantuml
  Downloading https://files.pythonhosted.org/packages/a9/1a/4603314acf466fdad91b7f6c83eb1364a7e279f9a8805febe3554f17faf
6/plantuml-0.3.0-py3-none-any.whl
Requirement already satisfied, skipping upgrade: httplib2 in /usr/local/lib/python3.7/dist-packages (from plantuml) (0.
20.4)
Requirement already satisfied, skipping upgrade: pyparsing!=3.0.0,!=3.0.1,!=3.0.2,!=3.0.3,<4,>=2.4.2; python_version >
"3.0" in /usr/local/lib/python3.7/dist-packages (from httplib2->plantuml) (3.0.8)
Installing collected packages: plantuml
Successfully installed plantuml-0.3.0
pi@raspberrypi:~/demo $ python3 -m plantuml intrusiondetection.uml
[{'filename': 'intrusiondetection.uml', 'gen_success': True}]
pi@raspberrypi:~/demo $ ls
API_KEY.pickle           intrusiondetection.yang  rpidata-348316-0e3554e10cea.json  system_info.py
intrusiondetection.png   intrusiondetection.yin   rpi_spreadsheet.py                thingspeak_cpu_loop.py
intrusiondetection.uml   __pycache__              rpi_spreadsheet.py.save            thingspeak_feed.py
pi@raspberrypi:~/demo $
```

```
pi@raspberrypi:~ $ sudo pip3 install -U lxml pyang
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Collecting lxml
  Downloading https://www.piwheels.org/simple/lxml/lxml-4.8.0-cp37-cp37m-linux_armv7l.whl (2.3MB)
    100% |                                | 2.3MB 144kB/s
Collecting pyang
  Downloading https://files.pythonhosted.org/packages/44/86/54b1f1037abcd4146f9c624fec0eb7c913320313e1556cc613400cb34b1
d/pyang-2.5.3-py2.py3-none-any.whl (592kB)
    100% |                                | 593kB 619kB/s
Installing collected packages: lxml, pyang
  Found existing installation: lxml 4.3.2
    Not uninstalling lxml at /usr/lib/python3/dist-packages, outside environment /usr
    Can't uninstall 'lxml'. No files were found to uninstall.
Successfully installed lxml-4.8.0 pyang-2.5.3
pi@raspberrypi:~ $ cp Desktop/CPE322iot/iot/lesson9/intrusiondetection.yang ~/demo/
pi@raspberrypi:~ $ cd ~/demo/
pi@raspberrypi:~/demo $ ls
API_KEY.pickle          rpidata-348316-0e3554e10cea.json  system_info.py
intrusiondetection.yang rpi_spreadsheet.py                thingspeak_cpu_loop.py
__pycache__             rpi_spreadsheet.py.save           thingspeak_feed.py
pi@raspberrypi:~/demo $ cat intrusiondetection.yang
```

```
  --help-all                      Show all help options
  --help-gegl                     Show GEGL Options
  --help-gtk                      Show GTK+ Options

Application Options:
  -v, --version                   Show version information and exit
  --license                       Show license information and exit
  --verbose                       Be more verbose
  -n, --new-instance              Start a new GIMP
  -a, --as-new                    Open images as n
  -i, --no-interface              Run without a us
  -d, --no-data                   Do not load brus
  -f, --no-fonts                  Do not load any
  -s, --no-splash                 Do not show a sp
  --no-shm                        Do not use share
  --no-cpu-accel                  Do not use speci
  --session=<name>                Use an alternate
  -g, --gimprc=<filename>         Use an alternate
  --system-gimprc=<filename>      Use an alternate
  -b, --batch=<command>           Batch command to
  --batch-interpreter=<proc>      The procedure to
  -c, --console-messages          Send messages to
  --pdb-compat-mode=<mode>        PDB compatibilit
  --stack-trace-mode=<mode>       Debug in case of
  --debug-handlers                Enable non-fatal
  --g-fatal-warnings              Make all warning
  --dump-gimprc                   Output a gimprc file with default settings
  --show-playground               Show a preferences page with experimental features
  --display=DISPLAY               X display to use

pi@raspberrypi:~/demo $ gimp -a intrusiondetection.png
```