

```
pi@raspberrypi:~ $ sudo apt install libxml2-dev libxslt1-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  icu-devtools libicu-dev libicu63 libxml2
Suggested packages:
  icu-doc
The following NEW packages will be installed:
  icu-devtools libicu-dev libxml2-dev libxslt1-dev
The following packages will be upgraded:
  libicu63 libxml2
2 upgraded, 4 newly installed, 0 to remove and 181 not upgraded.
Need to get 18.7 MB of archives.
After this operation, 45.2 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://raspbian.mirror.constant.com/raspbian buster/main armhf libicu63 armhf 63.1-6+deb10u3 [7,973 kB]
Get:2 http://raspbian.mirror.constant.com/raspbian buster/main armhf icu-devtools armhf 63.1-6+deb10u3 [163 kB]
Get:3 http://raspbian.mirror.constant.com/raspbian buster/main armhf libicu-dev armhf 63.1-6+deb10u3 [8,844 kB]
Get:4 http://raspbian.mirror.constant.com/raspbian buster/main armhf libxml2 armhf 2.9.4+dfsg1-7+deb10u3 [572 kB]
Get:5 http://raspbian.mirror.constant.com/raspbian buster/main armhf libxml2-dev armhf 2.9.4+dfsg1-7+deb10u3 [642 kB]
Get:6 http://raspbian.mirror.constant.com/raspbian buster/main armhf libxslt1-dev armhf 1.1.32-2.2~deb10u1 [491 kB]
Fetched 18.7 MB in 2s (10.4 MB/s)
Reading changelogs... Done
(Reading database ... 108040 files and directories currently installed.)
Preparing to unpack .../0-libicu63_63.1-6+deb10u3_armhf.deb ...
Unpacking libicu63:armhf (63.1-6+deb10u3) over (63.1-6+deb10u1) ...
Selecting previously unselected package icu-devtools.
Preparing to unpack .../1-icu-devtools_63.1-6+deb10u3_armhf.deb ...
Unpacking icu-devtools (63.1-6+deb10u3) ...
Selecting previously unselected package libicu-dev:armhf.
Preparing to unpack .../2-libicu-dev_63.1-6+deb10u3_armhf.deb ...
Unpacking libicu-dev:armhf (63.1-6+deb10u3) ...
Preparing to unpack .../3-libxml2_2.9.4+dfsg1-7+deb10u3_armhf.deb ...
Unpacking libxml2:armhf (2.9.4+dfsg1-7+deb10u3) over (2.9.4+dfsg1-7+deb10u1) ...
Selecting previously unselected package libxml2-dev:armhf.
Preparing to unpack .../4-libxml2-dev_2.9.4+dfsg1-7+deb10u3_armhf.deb ...
Unpacking libxml2-dev:armhf (2.9.4+dfsg1-7+deb10u3) ...
Selecting previously unselected package libxslt1-dev:armhf.
Preparing to unpack .../5-libxslt1-dev_1.1.32-2.2~deb10u1_armhf.deb ...
Unpacking libxslt1-dev:armhf (1.1.32-2.2~deb10u1) ...
Setting up libicu63:armhf (63.1-6+deb10u3) ...
Setting up icu-devtools (63.1-6+deb10u3) ...
Setting up libicu-dev:armhf (63.1-6+deb10u3) ...
Setting up libxml2:armhf (2.9.4+dfsg1-7+deb10u3) ...
Setting up libxml2-dev:armhf (2.9.4+dfsg1-7+deb10u3) ...
Setting up libxslt1-dev:armhf (1.1.32-2.2~deb10u1) ...
Processing triggers for man-db (2.8.5-2) ...
Processing triggers for libc-bin (2.28-10+rpil) ...
```

```
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 192kB/s
Collecting pyang
  Downloading https://files.pythonhosted.org/packages/44/86/54b1f1037abdc4146f9c624fec0eb7c913320313e1556cc613400cb34b1d/pyang-2.5.3-py2.py3-none-any.whl (592kB)
    100% |████████████████████████████████████████| 593kB 736kB/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 ~/iot/lesson9/intrusiondetection.yang ~/demo
pi@raspberrypi:~ $ cd demo
pi@raspberrypi:~/demo $ cat intrusiondetection.yang
module intrusiondetection {
```

```
    namespace "http://netconfcentral.org/ns/intrusiondetection";

    prefix "intrusion";

    description
        "YANG module for Intrusion Detection IoT system";

    revision 2014-07-15 {
        description "Intrusion Detection System";
    }

    grouping room {
        leaf doorsensorID {
            type string;
            description
                "ID of door sensor in the room";
        }
        leaf motionsensorID {
            type string;
            description
                "ID of motion sensor in the room";
        }
    }

    container intrusiondetection {
        presence
            "Indicates the service is available";

        description
            "Top-level container for all system objects.";

        leaf systemID {
            type string;
            config false;
            mandatory true;
            description
                "ID of the system";
        }
    }
```

```
pi@raspberrypi:~/demo $ pyang -f yin -o intrusiondetection.yin intrusiondetection.yang
pi@raspberrypi:~/demo $ cat intrusiondetection.yin
<?xml version='1.0' encoding='UTF-8'?>
<module name="intrusiondetection"
  xmlns="urn:ietf:params:xml:ns:yang:yin:1"
  xmlns:intrusion="http://netconfcentral.org/ns/intrusiondetection">
  <namespace uri="http://netconfcentral.org/ns/intrusiondetection"/>
  <prefix value="intrusion"/>
  <description>
    <text>YANG module for Intrusion Detection IoT system</text>
  </description>
  <revision date="2014-07-15">
    <description>
      <text>Intrusion Detection System</text>
    </description>
  </revision>
  <grouping name="room">
    <leaf name="doorsensorID">
      <type name="string"/>
      <description>
        <text>ID of door sensor in the room</text>
      </description>
    </leaf>
    <leaf name="motionsensorID">
      <type name="string"/>
      <description>
        <text>ID of motion sensor in the room</text>
      </description>
    </leaf>
  </grouping>
  <container name="intrusiondetection">
    <presence value="Indicates the service is available"/>
    <description>
      <text>Top-level container for all system objects.</text>
    </description>
    <leaf name="systemID">
      <type name="string"/>
      <config value="false"/>
      <mandatory value="true"/>
      <description>
        <text>ID of the system</text>
      </description>
    </leaf>
    <leaf name="systemLocation">
      <type name="string"/>
      <config value="false"/>
      <mandatory value="true"/>
      <description>
        <text>The location of the system</text>
      </description>
    </leaf>
    <leaf name="systemStatus">
      <type name="enumeration">
        <enum name="up">
          <value value="1"/>
          <description>
            <text>This is powered up</text>
          </description>
        </enum>
        <enum name="down">
          <value value="2"/>
          <description>
            <text>This is powered down</text>
          </description>
        </enum>
      </type>
    </leaf>
  </container>
  <rpc name="arm-system">
    <description>
      <text>Arm the system</text>
    </description>
  </rpc>
  <rpc name="disarm-system">
    <description>
      <text>Disarm the system</text>
    </description>
  </rpc>
  <notification name="systemArmed">
    <description>
      <text>Indicates that system has been armed.</text>
    </description>
  </notification>
  <leaf name="armStatus">
    <description>
      <text>Indicates the system arming status</text>
    </description>
    <type name="enumeration">
      <enum name="armed">
        <description>
          <text>The system was armed.</text>
        </description>
      </enum>
      <enum name="disarmed">
        <description>
          <text>The system was disarmed.</text>
        </description>
      </enum>
      <enum name="error">
        <description>
          <text>The system is broken.</text>
        </description>
      </enum>
    </type>
  </leaf>
</module>
```

```
leaf systemLocation {
    type string;
    config false;
    mandatory true;
    description
        "The location of the system";
}

leaf systemStatus {
    type enumeration {
        enum up {
            value 1;
            description
                "This is powered up";
        }
        enum down {
            value 2;
            description
                "This is powered down";
        }
        enum armed {
            value 3;
            description
                "This is armed";
        }
        enum disarmed {
            value 4;
            description
                "This is disarmed";
        }
    }
    config false;
    mandatory true;
    description
        "This variable indicates the current state of
        the system.";
}

container sensors {
    uses room;
    config false;
}

rpc arm-system {
    description
        "Arm the system";
}

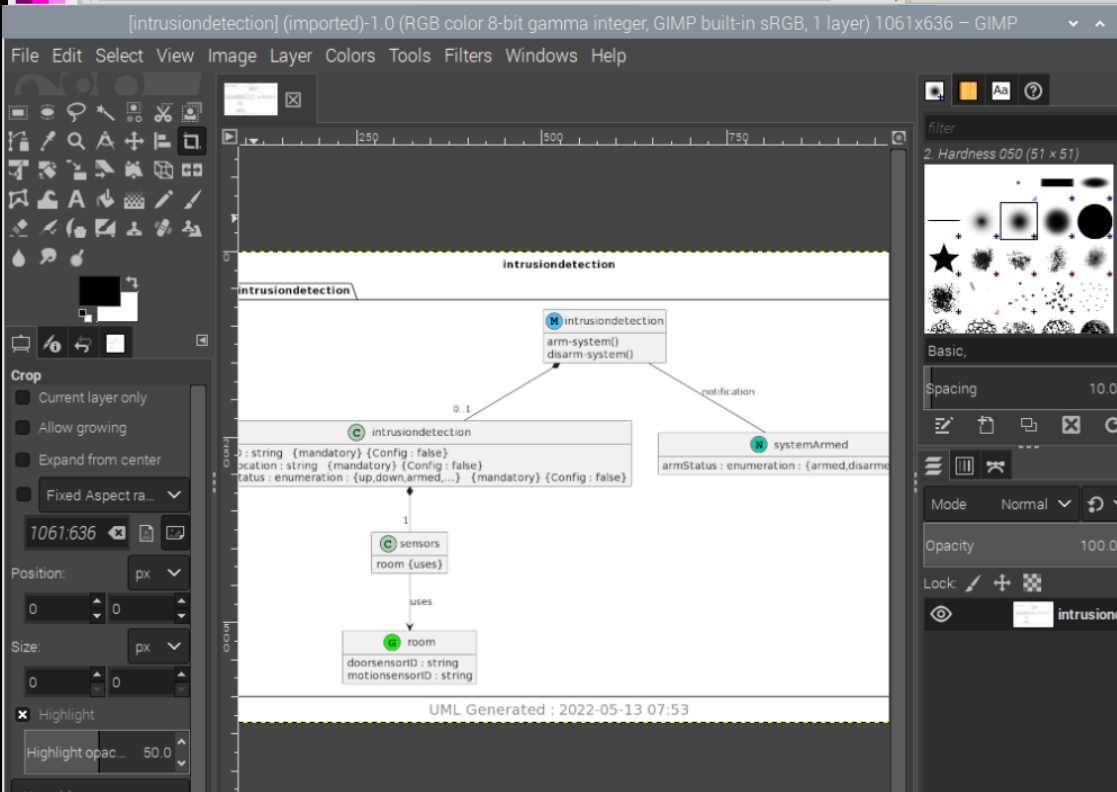
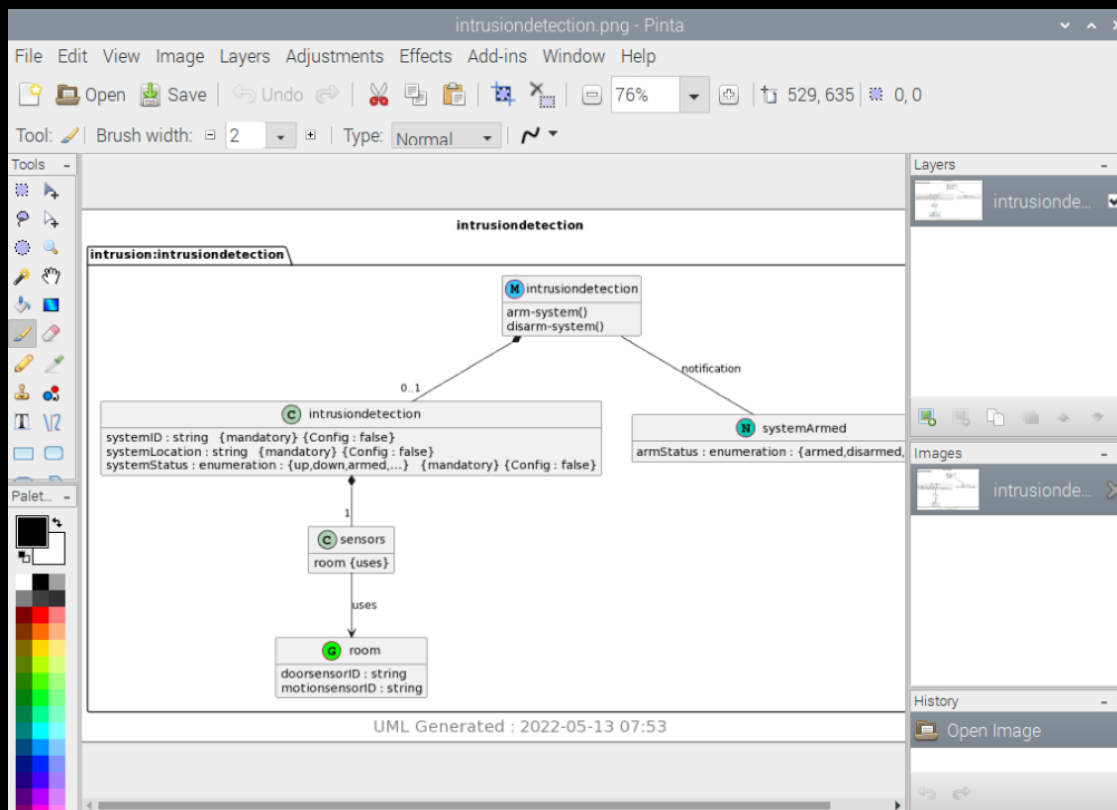
rpc disarm-system {
    description
        "Disarm the system";
}

notification systemArmed {
    description
        "Indicates that system has been armed.";
}

leaf armStatus {
    description
        "Indicates the system arming status";

    type enumeration {
        enum armed {
            description
                "The system was armed.";
        }
    }
}
```

```
</description>
</enum>
<enum name="armed">
  <value value="3"/>
  <description>
    <text>This is armed</text>
  </description>
</enum>
<enum name="disarmed">
  <value value="4"/>
  <description>
    <text>This is disarmed</text>
  </description>
</enum>
</type>
<config value="false"/>
<mandatory value="true"/>
<description>
  <text>This variable indicates the current state of
  the system.</text>
</description>
</leaf>
<container name="sensors">
  <uses name="room"/>
  <config value="false"/>
</container>
</container>
<rpc name="arm-system">
  <description>
    <text>Arm the system</text>
  </description>
</rpc>
<rpc name="disarm-system">
  <description>
    <text>Disarm the system</text>
  </description>
</rpc>
<notification name="systemArmed">
  <description>
    <text>Indicates that system has been armed.</text>
  </description>
  <leaf name="armStatus">
    <description>
      <text>Indicates the system arming status</text>
    </description>
    <type name="enumeration">
      <enum name="armed">
        <description>
          <text>The system was armed.</text>
        </description>
      </enum>
      <enum name="disarmed">
        <description>
          <text>The system was disarmed.</text>
        </description>
      </enum>
      <enum name="error">
        <description>
          <text>The system is broken.</text>
        </description>
      </enum>
    </type>
  </leaf>
</notification>
</module>
```

```

pi@raspberrypi:~/demo $ sudo sed -i 's/CONF_SWAPSIZE=100/CONF_SWAPSIZE=1024/' /etc/dphys-swapfile
pi@raspberrypi:~/demo $ sudo /etc/init.d/dphys-swapfile stop
[ ok ] Stopping dphys-swapfile (via systemctl): dphys-swapfile.service.
pi@raspberrypi:~/demo $ sudo /etc/init.d/dphys-swapfile start
[ ok ] Starting dphys-swapfile (via systemctl): dphys-swapfile.service.
pi@raspberrypi:~/demo $ pip3 install setuptools-rust
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Collecting setuptools-rust
  Downloading https://files.pythonhosted.org/packages/be/19/a9356aac40b2432cd159264be98843af062877ff27422cdd7cf023828835/setuptools_rust-1.3.0-py3-none-any.whl
Collecting semantic-version<3,>=2.8.2 (from setuptools-rust)
  Downloading https://files.pythonhosted.org/packages/64/ac/df31047966c4d0293e7bd16276ebc9f6654de36ad8e19061a09369380c0a/semantic_version-2.9.0-py2.py3-none-any.whl
Requirement already satisfied: setuptools>=58.0 in /usr/local/lib/python3.7/dist-packages (from setuptools-rust) (62.2.0)
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.7/dist-packages (from setuptools-rust) (4.2.0)
Installing collected packages: semantic-version, setuptools-rust
Successfully installed semantic-version-2.9.0 setuptools-rust-1.3.0
  
```

```

pi@raspberrypi:~/demo $ curl -o get_rustup.sh -s https://sh.rustup.rs
pi@raspberrypi:~/demo $ sh ./get_rustup.sh -y
info: downloading installer
info: profile set to 'default'
info: default host triple is armv7-unknown-linux-gnueabi
info: syncing channel updates for 'stable-armv7-unknown-linux-gnueabi'
info: latest update on 2022-04-07, rust version 1.60.0 (7737e0b5c 2022-04-04)
info: downloading component 'cargo'
info: downloading component 'clippy'
info: downloading component 'rust-docs'
info: downloading component 'rust-std'
info: downloading component 'rustc'
79.3 MiB / 79.3 MiB (100 %) 37.8 MiB/s in 5s ETA: 0s
info: downloading component 'rustfmt'
info: installing component 'cargo'
5.7 MiB / 5.7 MiB (100 %) 5.1 MiB/s in 1s ETA: 0s
info: installing component 'clippy'
info: installing component 'rust-docs'
19.5 MiB / 19.5 MiB (100 %) 907.2 KiB/s in 32s ETA: 0s
info: installing component 'rust-std'
23.8 MiB / 23.8 MiB (100 %) 4.5 MiB/s in 7s ETA: 0s
info: installing component 'rustc'
79.3 MiB / 79.3 MiB (100 %) 4.2 MiB/s in 18s ETA: 0s
5 IO-ops / 5 IO-ops (100 %) 4 IOPS in 1s ETA: 0s
info: installing component 'rustfmt'
info: default toolchain set to 'stable-armv7-unknown-linux-gnueabi'

    stable-armv7-unknown-linux-gnueabi installed - rustc 1.60.0 (7737e0b5c 2022-04-04)

```

Rust is installed now. Great!

To get started you may need to restart your current shell.
This would reload your PATH environment variable to include
Cargo's bin directory (\$HOME/.cargo/bin).

To configure your current shell, run:
source \$HOME/.cargo/env _

```

pi@raspberrypi:~/demo $ pip3 install --prefer-binary networkx
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Collecting networkx
  Downloading https://www.piwheels.org/simple/networkx/networkx-0.11.0-cp37m-cp37m-linux_armv7l.whl (1.9MB)
    100% |#####| 1.9MB 233kB/s
Requirement already satisfied: numpy>=1.16.0 in /usr/lib/python3/dist-packages (from networkx) (1.16.2)
Installing collected packages: networkx
Successfully installed networkx-0.11.0
pi@raspberrypi:~/demo $ sudo apt -y install cmake libatlas-base-dev git
Reading package lists... Done
Building dependency tree
Reading state information... Done
git is already the newest version (1:2.20.1-2+deb10u3).
libatlas-base-dev is already the newest version (3.10.3-8+rpil).
The following additional packages will be installed:
  cmake-data libjsoncpp1 libhash0 libuv1
Suggested packages:
  cmake-doc ninja-build
The following NEW packages will be installed:
  cmake cmake-data libjsoncpp1 libhash0 libuv1
0 upgraded, 5 newly installed, 0 to remove and 181 not upgraded.
Need to get 4,423 kB of archives.
After this operation, 22.5 MB of additional disk space will be used.
Get:1 http://archive.raspberrypi.org/debian buster/main armhf cmake-data all 3.16.3-3-bpo10+1 [1,628 kB]
Get:2 http://raspbrian.mirror.constant.com/raspbian buster/main armhf libjsoncpp1 armhf 1.7.4-3 [66.2 kB]
Get:3 http://raspbrian.mirror.constant.com/raspbian buster/main armhf libhash0 armhf 1.3.8-1 [132 kB]
Get:4 http://raspbrian.mirror.constant.com/raspbian buster/main armhf libuv1 armhf 1.24.1-1+deb10u1 [96.9 kB]
Get:5 http://archive.raspberrypi.org/debian buster/main armhf cmake armhf 3.16.3-3-bpo10+1 [2,500 kB]
Fetched 4,423 kB in 1s (3,474 kB/s)
Selecting previously unselected package cmake-data.
(Reading database ... 113019 files and directories currently installed.)
Preparing to unpack .../cmake-data 3.16.3-3-bpo10+1_all.deb ...
Unpacking cmake-data (3.16.3-3-bpo10+1) ...
Selecting previously unselected package libjsoncpp1:armhf.
Preparing to unpack .../libjsoncpp1 1.7.4-3_armhf.deb ...
Unpacking libjsoncpp1:armhf (1.7.4-3) ...
Selecting previously unselected package libhash0:armhf.
Preparing to unpack .../libhash0 1.3.8-1_armhf.deb ...
Unpacking libhash0:armhf (1.3.8-1) ...
Selecting previously unselected package libuv1:armhf.
Preparing to unpack .../libuv1 1.24.1-1+deb10u1_armhf.deb ...
Unpacking libuv1:armhf (1.24.1-1+deb10u1) ...
Selecting previously unselected package cmake.
Preparing to unpack .../cmake 3.16.3-3-bpo10+1_armhf.deb ...
Unpacking cmake (3.16.3-3-bpo10+1) ...
Setting up libuv1:armhf (1.24.1-1+deb10u1) ...
Setting up libhash0:armhf (1.3.8-1) ...
Setting up cmake-data (3.16.3-3-bpo10+1) ...
Install cmake-data for emacs
Setting up libjsoncpp1:armhf (1.7.4-3) ...
Setting up cmake (3.16.3-3-bpo10+1) ...
Processing triggers for man-db (2.8.5-2) ...
Processing triggers for libc-bin (2.28-10+rpil) ...

```



```
pi@raspberrypi:~/demo/libcint/build $ sudo make install
```

```
Scanning dependencies of target cint
```

```
[ 2%] Building C object CMakeFiles/cint.dir/src/c2f.c.o
[ 5%] Building C object CMakeFiles/cint.dir/src/cart2sph.c.o
[ 7%] Building C object CMakeFiles/cint.dir/src/cint1e.c.o
[10%] Building C object CMakeFiles/cint.dir/src/cint2e.c.o
[12%] Building C object CMakeFiles/cint.dir/src/cint_bas.c.o
[15%] Building C object CMakeFiles/cint.dir/src/fblas.c.o
[17%] Building C object CMakeFiles/cint.dir/src/gle.c.o
[20%] Building C object CMakeFiles/cint.dir/src/g2e.c.o
[22%] Building C object CMakeFiles/cint.dir/src/misc.c.o
[25%] Building C object CMakeFiles/cint.dir/src/optimizer.c.o
[27%] Building C object CMakeFiles/cint.dir/src/fmt.c.o
[30%] Building C object CMakeFiles/cint.dir/src/rys_wheeler.c.o
[32%] Building C object CMakeFiles/cint.dir/src/leigh.c.o
[35%] Building C object CMakeFiles/cint.dir/src/rys_roots.c.o
[37%] Building C object CMakeFiles/cint.dir/src/cint2c2e.c.o
[40%] Building C object CMakeFiles/cint.dir/src/g2c2e.c.o
[42%] Building C object CMakeFiles/cint.dir/src/cint3c2e.c.o
[45%] Building C object CMakeFiles/cint.dir/src/g3c2e.c.o
[47%] Building C object CMakeFiles/cint.dir/src/cint3cle.c.o
[50%] Building C object CMakeFiles/cint.dir/src/g3cle.c.o
[52%] Building C object CMakeFiles/cint.dir/src/breit.c.o
[55%] Building C object CMakeFiles/cint.dir/src/cint1e_a.c.o
[57%] Building C object CMakeFiles/cint.dir/src/cint3cle_a.c.o
[60%] Building C object CMakeFiles/cint.dir/src/cint1e_grids.c.o
[62%] Building C object CMakeFiles/cint.dir/src/gle_grids.c.o
[65%] Building C object CMakeFiles/cint.dir/src/autocode/breit1.c.o
[67%] Building C object CMakeFiles/cint.dir/src/autocode/dkb.c.o
[70%] Building C object CMakeFiles/cint.dir/src/autocode/gaunt1.c.o
[72%] Building C object CMakeFiles/cint.dir/src/autocode/grad1.c.o
[75%] Building C object CMakeFiles/cint.dir/src/autocode/grad2.c.o
[77%] Building C object CMakeFiles/cint.dir/src/autocode/hess.c.o
[80%] Building C object CMakeFiles/cint.dir/src/autocode/int3cle.c.o
[82%] Building C object CMakeFiles/cint.dir/src/autocode/int3c2e.c.o
[85%] Building C object CMakeFiles/cint.dir/src/autocode/intor1.c.o
[87%] Building C object CMakeFiles/cint.dir/src/autocode/intor2.c.o
[90%] Building C object CMakeFiles/cint.dir/src/autocode/intor3.c.o
[92%] Building C object CMakeFiles/cint.dir/src/autocode/intor4.c.o
[95%] Building C object CMakeFiles/cint.dir/src/autocode/deriv3.c.o
[97%] Building C object CMakeFiles/cint.dir/src/autocode/intle_grids1.c.o
[100%] Linking C shared library libcint.so
[100%] Built target cint
```

```
Install the project...
```

```
-- Install configuration: "RELWITHDEBINFO"
-- Installing: /usr/local/lib/libcint.so.5.1.2
-- Installing: /usr/local/lib/libcint.so.5
-- Installing: /usr/local/lib/libcint.so
-- Installing: /usr/local/include/cint_funcs.h
-- Installing: /usr/local/include/cint.h
```

```
pi@raspberrypi:~/demo/libcint/build $ sudo pip3 install --prefer-binary 'giskit[visualization]==0.23.1'
```

```
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
```

```
Collecting giskit[visualization]==0.23.1
```

```
  Downloading https://www.piwheels.org/simple/giskit/giskit-0.23.1-py3-none-any.whl
```

```
Collecting giskit-ignis==0.5.1 (from giskit[visualization]==0.23.1)
```

```
  Downloading https://files.pythonhosted.org/packages/f7/42/5e151db90eb0d08d0f799f72c1922cded76065b03c4ca4fc11ec0085ce/giskit_ignis-0.5.1-py3-none-any.whl (204kB)
```

```
    100% |#####| 204kB 2.0MB/s
```

```
Collecting giskit-terra==0.16.1 (from giskit[visualization]==0.23.1)
```

```
  Downloading https://www.piwheels.org/simple/giskit-terra/giskit_terra-0.16.1-cp37m-cp37m-linux_armv7l.whl (8.5MB)
```

```
    100% |#####| 8.5MB 56kB/s
```

```
Collecting giskit-ibmq-provider==0.11.1 (from giskit[visualization]==0.23.1)
```

```
  Downloading https://files.pythonhosted.org/packages/32/b9/f99bec4fdc4dec234d8a8da378750441a203c614be35353f5e8738316/giskit_ibmq_provider-0.11.1-py3-none-any.whl (195kB)
```

```
    100% |#####| 204kB 2.1MB/s
```

```
Collecting giskit-aer==0.7.1 (from giskit[visualization]==0.23.1)
```

```
  Downloading https://www.piwheels.org/simple/giskit-aer/giskit_aer-0.7.1-cp37m-cp37m-linux_armv7l.whl (7.9MB)
```

```
    100% |#####| 7.9MB 58kB/s
```

```
Collecting giskit-aqua==0.8.1 (from giskit[visualization]==0.23.1)
```

```
  Downloading https://files.pythonhosted.org/packages/4d/5f/41abad4b0375effe79a51a20130da6c18bb2101c257366aab0f300197e53/giskit_aqua-0.8.1-py3-none-any.whl (2.1MB)
```

```
    100% |#####| 2.1MB 211kB/s
```

```
Collecting seaborn>=0.9.0; extra == "visualization" (from giskit[visualization]==0.23.1)
```

```
  Downloading https://files.pythonhosted.org/packages/10/5b/0479d7d845b5ba410ca702ffcd7f2cd95a14a4dffff1fde2637802b258b9b/seaborn-0.11.2-py3-none-any.whl (292kB)
```

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    100% |#####| 296kB 1.5MB/s
```

```
Requirement already satisfied: pillow>=4.2.1; extra == "visualization" in /usr/lib/python3/dist-packages (from giskit[visualization]==0.23.1) (5.4.1)
```

```
Collecting ipywidgets>=7.3.0; extra == "visualization" (from giskit[visualization]==0.23.1)
```

```
  Downloading https://files.pythonhosted.org/packages/86/7d/06b48ec5fd605775c7e85b3ea397d8f0294f66d570bcee59496eb5195fc5/ipywidgets-7.7.0-py2.py3-none-any.whl (123kB)
```

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    100% |#####| 133kB 3.1MB/s
```

```
Collecting pylatexenc>=1.4; extra == "visualization" (from giskit[visualization]==0.23.1)
```

```
  Downloading https://www.piwheels.org/simple/pylatexenc/pylatexenc-2.10-py3-none-any.whl (138kB)
```

```
    100% |#####| 143kB 854kB/s
```

```
Collecting pydot; extra == "visualization" (from giskit[visualization]==0.23.1)
```

```
  Downloading https://files.pythonhosted.org/packages/ea/76/75b1bb82e9bad3e3d6565eaa353d8cd17c4254393b08ec9786ac8ed273/pydot-1.4.2-py2.py3-none-any.whl
```

```
Collecting pygments>=2.4; extra == "visualization" (from giskit[visualization]==0.23.1)
```