

Get munkres.so

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Requirement

Please refer to this previous [tutorial](http://furuidemu.blogspot.com/2018/10/a-practical-tutorial-for-eclipse-cdt-cc.html) for how to install the eclipse and write C code.

<http://furuidemu.blogspot.com/2018/10/a-practical-tutorial-for-eclipse-cdt-cc.html>

Please refer to this previous [tutorial](http://furuidemu.blogspot.com/2018/09/invoke-c-function-in-python.html) for creating a C extension by using Python distutils.

<http://furuidemu.blogspot.com/2018/09/invoke-c-function-in-python.html>

1. Install Library in Ubuntu18.04.1

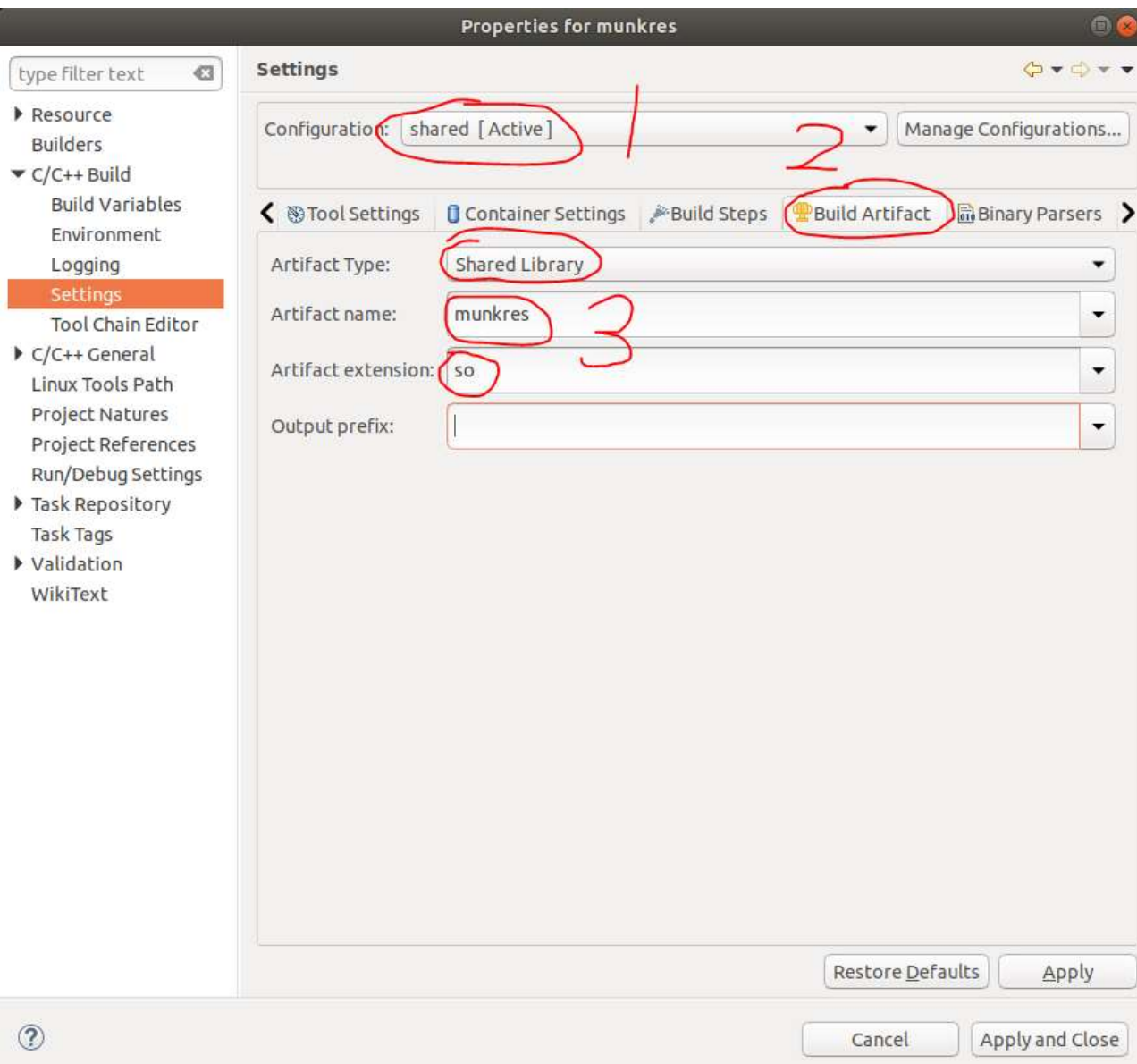
```
$ sudo apt install g++ cmake python3-dev python3-numpy
```

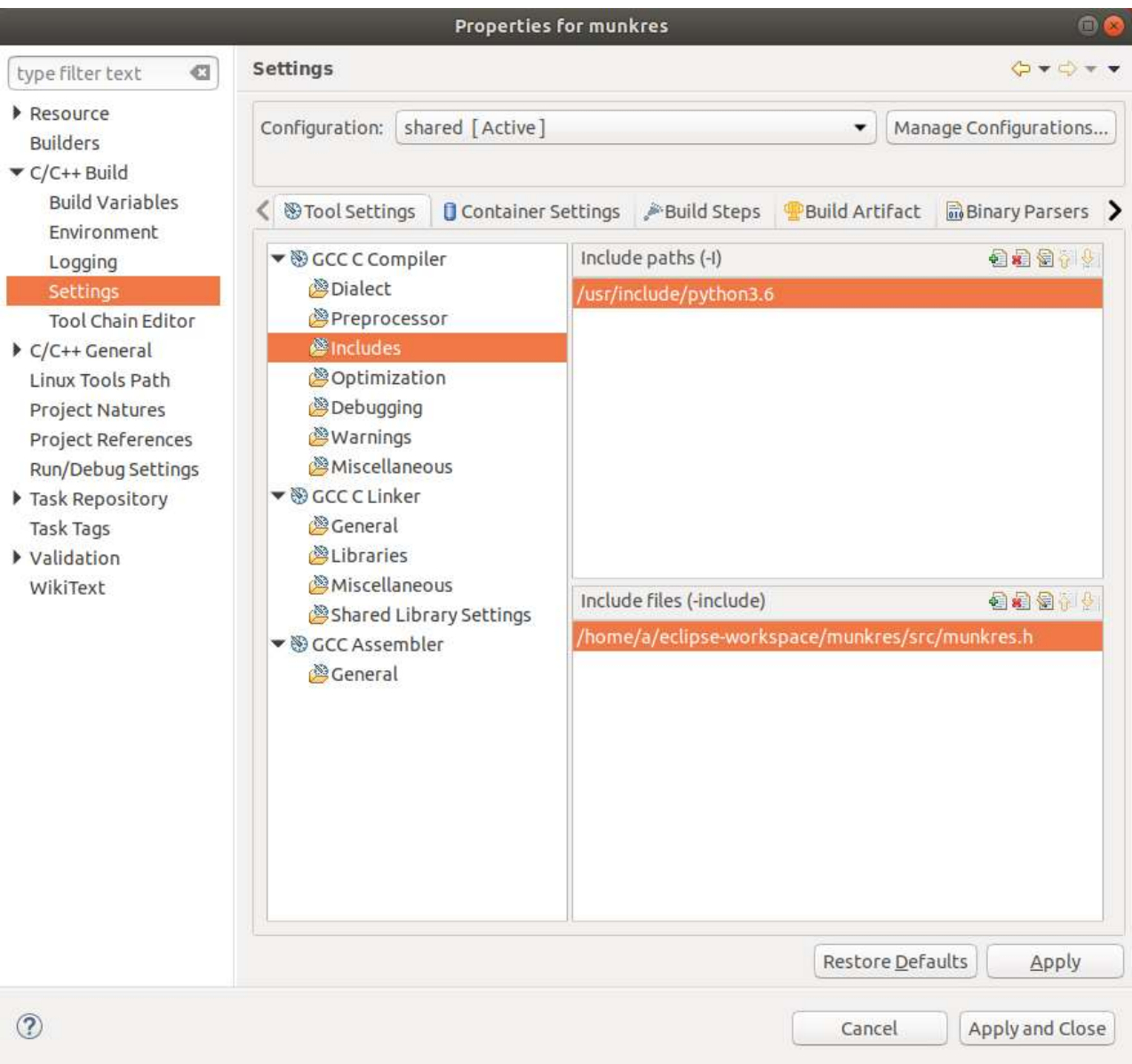
2. Download JDK and Eclipse. Then run Eclipse

```
$ export JAVA_HOME=~/.software/jdk1.8.0_191/
```

```
$ export PATH=$PATH:$JAVA_HOME/bin
```

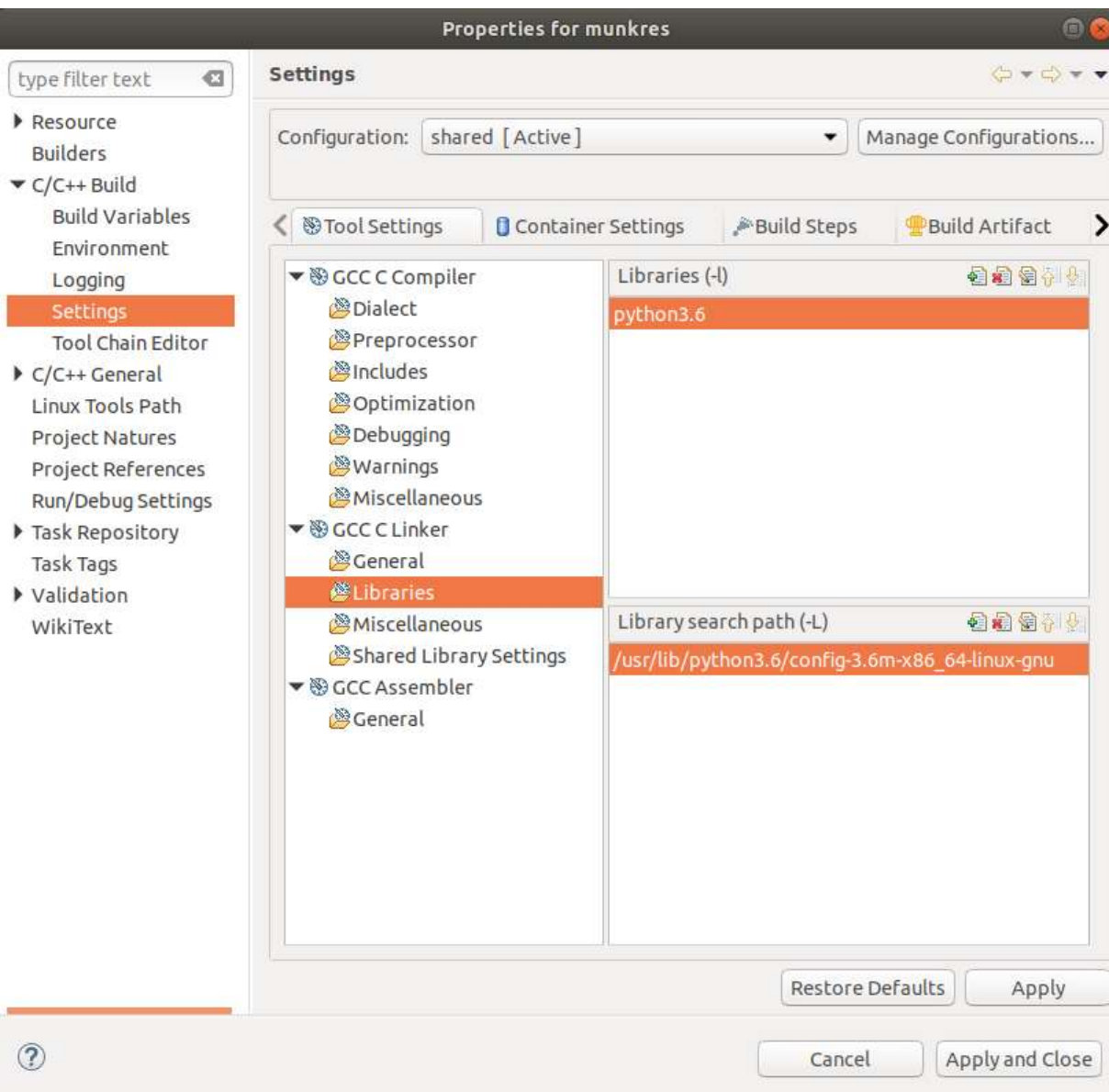
```
$ ./eclipse/eclipse
```

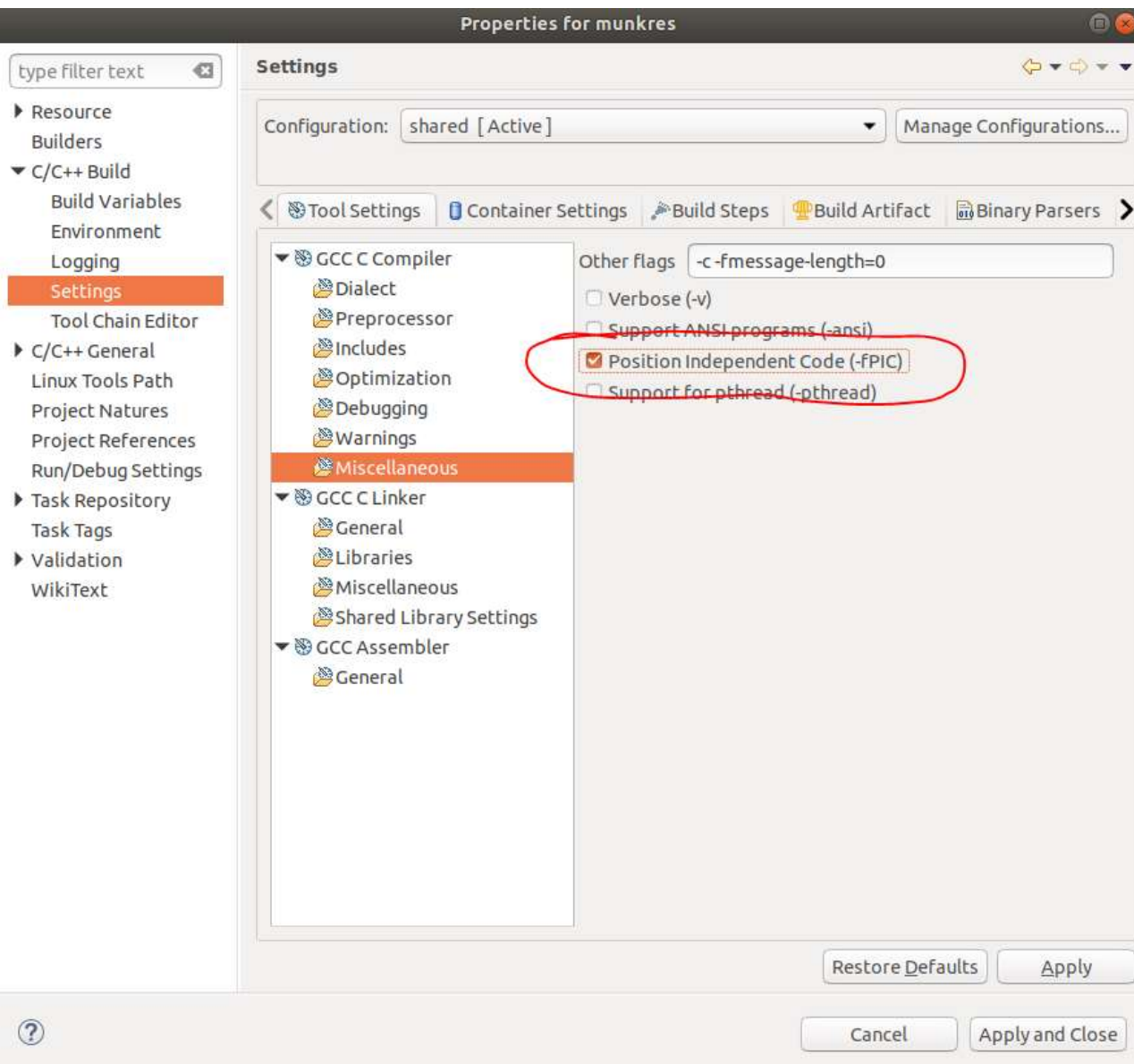


Header file `Python.h` is included in `munkres.c`, so its path is provided.

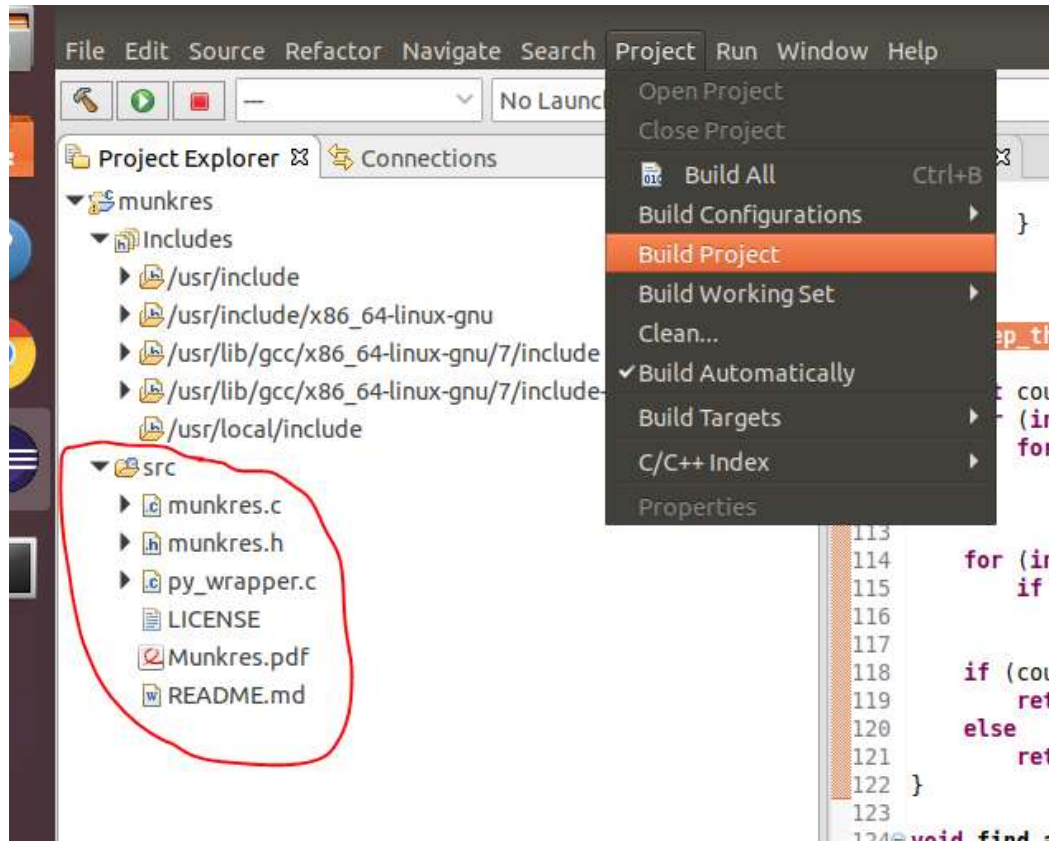
munkres.h is also specified.



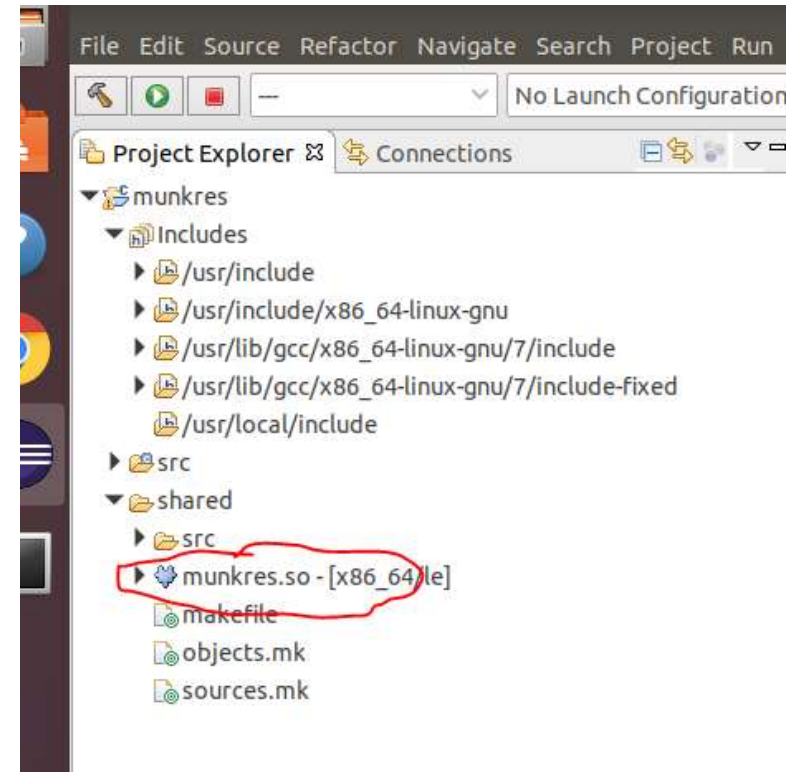
Python shared library is provided.



-fPIC flag is checked



Preparation is done.



Shared folder is newly created.
munkres.so resides there.


```
a@a:~$ python3
Python 3.6.7 (default, Oct 22 2018, 11:32:17)
[GCC 8.2.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import sys
>>> sys.path.append('/home/a/eclipse-workspace/munkres/shared/')
>>> import munkres
>>> munkres.solver([[10, 19, 8, 15],
... [10, 18, 7, 17],
... [13, 16, 9, 14],
... [12, 19, 8, 18],
... [14, 17, 10, 19]])
(array([ 0,  2,  3, -1,  1], dtype=int32), array([0, 4, 1, 2], dtype=int32))
```

Import the C extension and have fun with it.