

Installation

You can use basically the same environment as in hw2, with just one modification.

```
conda activate <hw2-env-name>
pip install dotmap==1.3.30 gymnasium[box2d]==0.27.1
```

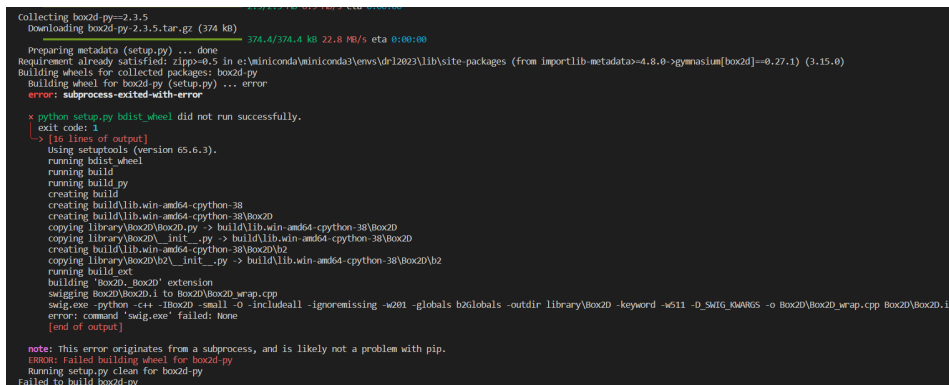
if you are using zsh as your shell, use the following command instead:

```
conda activate <hw2-env-name>
pip install dotmap==1.3.30 gymnasium\[box2d\]==0.27.1
```

We use the `dotmap` package to have a "dot-able" config dictionary as a substitution for the default one, as we find the original dictionary from hydra is slow.

You may encounter several errors when installing `gymnasium[box2d]` depending on your system and requirements installed previously, here's an incomplete list of how to get over them:

1. `error: command 'swig.exe' failed: None` or `command 'swig' failed: No such file or directory`



```
Collecting box2d-py==2.3.5
  Downloading box2d-py-2.3.5.tar.gz (374 kB)
    374.4/374.4 kB 22.0 MB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Requirement already satisfied: zipp>=0.5 in e:\miniconda3\envs\dr12023\lib\site-packages (from importlib-metadata==4.8.0->gymnasium[box2d]==0.27.1) (3.15.0)
Building wheels for collected packages: box2d-py
  Building wheel for box2d-py (setup.py) ... error
  error: subprocess-exited-with-error

  × python setup.py bdist_wheel did not run successfully.
  | exit code: 1
  | [16 lines of output]
  | Using setuptools (version 65.6.3).
  | running bdist_wheel
  | running build
  | running build_py
  | creating build
  | creating build\lib.win-amd64-cpython-38
  | creating build\lib.win-amd64-cpython-38\box2d
  | copying library\box2d\__init__.py -> build\lib.win-amd64-cpython-38\box2d
  | copying library\box2d\__init__.py -> build\lib.win-amd64-cpython-38\box2d
  | copying library\box2d\__init__.py -> build\lib.win-amd64-cpython-38\box2d
  | running build_ext
  | building 'box2d.Box2D' extension
  | swigging box2d\Box2D.i to box2d\Box2D_wrap.cpp
  | swig.exe -python -c++ -Ibox2d -swig -O -includeall -ignoremissing -w201 -globals b2Globals -outdir library\box2d -keyword -w611 -D SWIG_I386MS -O box2d\Box2D_wrap.cpp box2d\Box2D.i
  | error: command 'swig.exe' failed: None
  | [end of output]

  note: This error originates from a subprocess, and is likely not a problem with pip.
error: Failed building wheel for box2d-py
Running setup.py clean for box2d-py
Failed to build box2d-py
```

![[3a9a7392f3a551df99e4191f31b3e08]]In that case you can install `swig` via `conda install swig` in your `<hw2-env-name>` environment and try again. If the same error persists, try the guide in this [link](#) to install `swig` manually.

2. On the window platform, you may encounter the problem: `error: Microsoft Visual C++ 14.0 or greater is required. Get it with "Microsoft C++ Build Tools"`

```
Running setup.py install for box2d-py ... error
error: subprocess-exited-with-error

x Running setup.py install for box2d-py did not run successfully.
  exit code: 1
  [30 lines of output]
  Using setuptools (version 65.6.3).
  running install
  D:\Miniconda\envs\dr1_hw2\lib\site-packages\setuptools\command\install.py:34: SetuptoolsDeprecationWarning: setup.py install is deprecated. Use build
  pip and other standards-based tools.
    warnings.warn(
  running build
  running build_py
  creating build
  creating build\lib.win-amd64-cpython-310
  creating build\lib.win-amd64-cpython-310\Box2D
  copying library\Box2D\Box2D.py -> build\lib.win-amd64-cpython-310\Box2D
  copying library\Box2D\__init__.py -> build\lib.win-amd64-cpython-310\Box2D
  creating build\lib.win-amd64-cpython-310\Box2D\b2
  copying library\Box2D\b2\__init__.py -> build\lib.win-amd64-cpython-310\Box2D\b2
  running build_ext
  building 'Box2D.Box2D' extension
  swigging Box2D\Box2D.i to Box2D\Box2D_wrap.cpp
  swig.exe -python -c++ -IBox2D -small -O -includeall -ignoremissing -w201 -globals b2Globals -outdir library\Box2D -keyword -w511 -D_SWIG_KWARGS -o
  ox2D_wrap.cpp Box2D\Box2D.i
  Box2D\Common\b2Math.h(67) : Warning 302: Identifier 'b2Vec2' redefined by %extend (ignored),
  Box2D\Box2D_math.i(47) : Warning 302: %extend definition of 'b2Vec2'.
  Box2D\Common\b2Math.h(158) : Warning 302: Identifier 'b2Vec3' redefined by %extend (ignored),
  Box2D\Box2D_math.i(168) : Warning 302: %extend definition of 'b2Vec3'.
  Box2D\Common\b2Math.h(197) : Warning 302: Identifier 'b2Mat22' redefined by %extend (ignored),
  Box2D\Box2D_math.i(301) : Warning 302: %extend definition of 'b2Mat22'.
  Box2D\Common\b2Math.h(271) : Warning 302: Identifier 'b2Mat33' redefined by %extend (ignored),
  Box2D\Box2D_math.i(372) : Warning 302: %extend definition of 'b2Mat33'.
  Box2D\Collision\b2DynamicTree.h(44) : Warning 312: Nested union not currently supported (ignored).
  Box2D\Common\b2Settings.h(144) : Warning 506: Can't wrap varargs with keyword arguments enabled
  Box2D\Common\b2Math.h(91) : Warning 509: Overloaded method b2Vec2::operator()(int32) effectively ignored,
  Box2D\Common\b2Math.h(85) : Warning 509: as it is shadowed by b2Vec2::operator()(int32) const.
  error: Microsoft Visual C++ 14.0 or greater is required. Get it with "Microsoft C++ Build Tools": https://visualstudio.microsoft.com/visual-cpp-bu
  s/

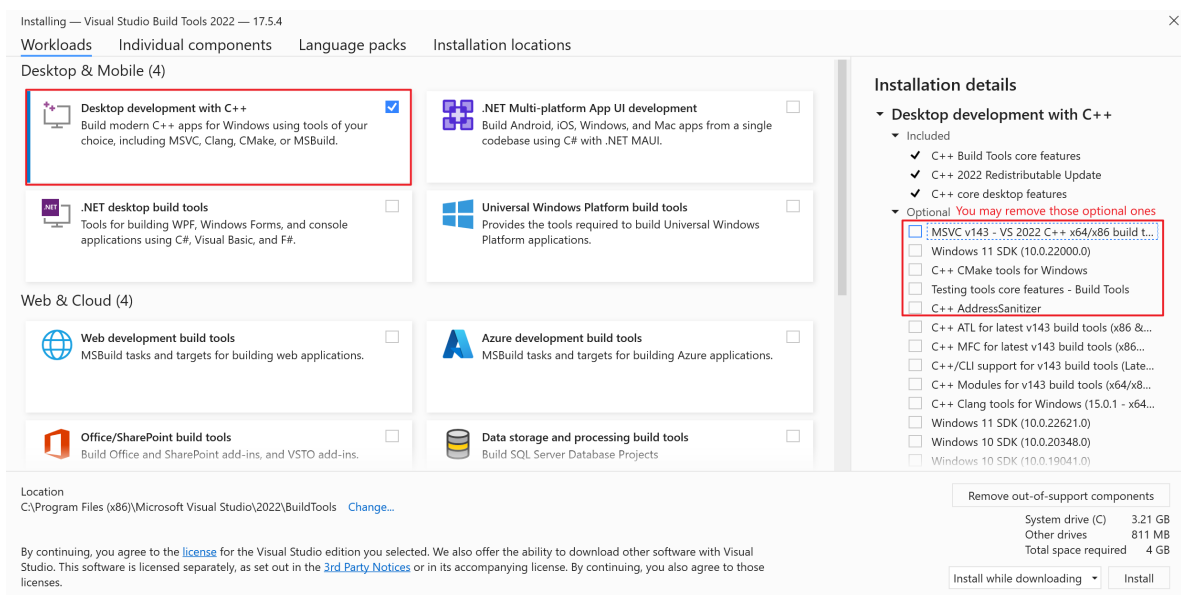
  [end of output]

  note: This error originates from a subprocess, and is likely not a problem with pip.
error: legacy-install-failure

x Encountered error while trying to install package.
  box2d-py

note: This is an issue with the package mentioned above, not pip.
```

In that case, you can follow this [link](#) the error message provided and download the build tool and run it. You'll need to select the "Desktop development with C++" checkbox in the "Workloads", and you may remove the optional requirements in the right sidebar (MSVC, Windows SDK, CMake tools, etc.)



After the installation is finished, restart your computer and try installing `gymnasium[box2d]` again (if you encounter the same error, try to select the optional dependencies and try again). There may be other issues concerning the installation of `gymnasium[box2d]`, please contact us if you find yourself in a different situation.

That's it! If you encounter any trouble creating the environment, please let us know :-)