

For the build management system I've chosen the pybuilder.

At first I needed to use some commands to get it into work:

“pip install pybuilder” - To install build management tool

“pyb --start-project” - where I described the name of the project as well as directories and plugins to store data

In build.py I made the definitions:

```
build.py > ...
1  # -*- coding: utf-8 -*-
2  from pybuilder.core import use_plugin, init
3
4  use_plugin("python.core")
5  use_plugin("python.unittest")
6  use_plugin("python.flake8")
7  use_plugin("python.coverage")
8  use_plugin("python.distutils")
9
10
11  name = "softwaredevelopment"
12  default_task = "publish"
13
14
15  @init
16  def set_properties(project):
17      pass
18
```

After that I needed to create the file in “src/main/python” called main.py where I imported the library

```
main.py  build.py
src > main > python > main.py > helloworld
1  import sys
2
3  def helloworld(out):
4      out.write("Hello world of Python\n")
```

I used in terminal command “pyb” to build the project:

```
PS F:\test\qqrdr> pyb
PyBuilder version 0.13.10
Build started at 2024-01-23 19:06:41

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[INFO] Building softwaredevelopment version 1.0.dev0
[INFO] Executing build in f:\test\qqrdr
[INFO] Going to execute task publish
[INFO] Processing plugin packages 'coverage>=6.0' to be installed with {'upgrade': True}
[INFO] Processing plugin packages 'flake8>=4.0' to be installed with {'upgrade': True}
[INFO] Processing plugin packages 'pypandoc=1.4' to be installed with {'upgrade': True}
[INFO] Processing plugin packages 'setuptools>=38.6.0' to be installed with {}
[INFO] Processing plugin packages 'twine>=1.15.0' to be installed with {'upgrade': True}
[INFO] Processing plugin packages 'unittest-xml-reporting>=3.0.4' to be installed with {'upgrade': True}
[INFO] Processing plugin packages 'wheel>=0.34.0' to be installed with {}
[INFO] Creating target 'build' VEnv in 'f:\test\qqrdr\target\venv\build\cpython-3.12.0.final.0'
[INFO] Creating target 'test' VEnv in 'f:\test\qqrdr\target\venv\test\cpython-3.12.0.final.0'
[INFO] Requested coverage for tasks: pybuilder.plugins.python.unittest_plugin:run_unit_tests
[INFO] Running unit tests
[INFO] Executing unit tests from Python modules in f:\test\qqrdr\src\unittest\python
[WARN] No unit tests executed.
[INFO] All unit tests passed.
[INFO] Building distribution in f:\test\qqrdr\target\dist\softwaredevelopment-1.0.dev0
[INFO] Copying scripts to f:\test\qqrdr\target\dist\softwaredevelopment-1.0.dev0\scripts
[INFO] Writing setup.py as f:\test\qqrdr\target\dist\softwaredevelopment-1.0.dev0\setup.py
[INFO] Collecting coverage information for 'pybuilder.plugins.python.unittest_plugin:run_unit_tests'
[WARN] ut coverage branch threshold warn is 0 and branch coverage will not be checked
[WARN] ut coverage branch partial threshold warn is 0 and partial branch coverage will not be checked
[INFO] Running unit tests
[INFO] Executing unit tests from Python modules in f:\test\qqrdr\src\unittest\python
f:\test\qqrdr\pybuilder\plugins\cpython-3.12.0.final.0\lib\site-packages\coverage\control.py:885: CoverageWarning: No data was collected. (no-data-collected)
  self.warn("No data was collected.", slug="no-data-collected")
[WARN] No unit tests executed.
[INFO] All unit tests passed.
[INFO] Overall pybuilder.plugins.python.unittest_plugin.run_unit_tests coverage is 100%
[INFO] Overall pybuilder.plugins.python.unittest_plugin.run_unit_tests branch coverage is 100%
[INFO] Overall pybuilder.plugins.python.unittest_plugin.run_unit_tests partial branch coverage is 100%
[INFO] Overall softwaredevelopment coverage is 100%
[INFO] Overall softwaredevelopment branch coverage is 100%
[INFO] Overall softwaredevelopment partial branch coverage is 100%
[INFO] Building binary distribution in f:\test\qqrdr\target\dist\softwaredevelopment-1.0.dev0
[INFO] Running Twine check for generated artifacts

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BUILD SUCCESSFUL
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Build Summary
  Project: softwaredevelopment
  Version: 1.0.dev0
  Base directory: f:\test\qqrdr
  Environments:
    Tasks: prepare [26967 ms] compile_sources [0 ms] run_unit_tests [205 ms] package [2 ms] run_integration_tests [0 ms] verify [0 ms] coverage [445 ms] publish [1373 ms]
Build finished at 2024-01-23 19:07:14
Build took 33 seconds (33343 ms)
PS F:\test\qqrdr> []
```