Cheatsheet: Python Coding Practices and Packaging Concepts

Estimated time needed: 5 minutes

Package/Method	Description	Code Example

Packaging	To create a package, the folder structure is as follows:
	1. **Project folder → Package name → init.py**, **module_1.py**, **module_2.py**, and so on.
	2. In the **init.py** file, add code to reference the modules in the package.
		module1.py
		`def function_1(arg):`
		`  return <operation output>`
		init.py:
		`from . import function_1`

Python Style Guide	• Four spaces for indentation
	• Use blank lines to separate functions and classes
	• Use spaces around operators and after commas
	• Add larger blocks of code inside functions
	• Name functions and files using lowercase with underscores
	• Name classes using CamelCase
	• Name constants in capital letters with underscores separating words
		`def function_1(a, b):`
		`  if a > b:`
		`  c = c + 5`
		`  else:`
		`  c = c - 3`
		`  return c`
		…
		`c = function_1(a, b)`
		Constant Definition example
		`MAX_FILE_UPLOAD_SIZE`

Static Code Analysis	Use Static code analysis method to evaluate your code against a predefined style and standard without executing the code. For example, use Pylint to perform static code analysis.	**Shell code:** `pylint code.py`
Unit Testing	Unit testing is a method to validate if units of code are operating as designed.	`import unittest`

Package/Method	Description	Code Example

	During code development, each unit is tested. The unit is tested in a continuous integration/continuous delivery test server environment.
	
	You can use different test functions to build unit tests and review the unit test output to determine if the test passed or failed.
		`from mypackage.mymodule import my_function`
		
		`class TestMyFunction(unittest.TestCase):`
		
		`  def test_my_function(self):`
		
		`  result = my_function(<args>)`
		
		`  self.asserEqual(result, <response>)`
		
		`unittest.main()`

Author(s)

Abhishek Gagneja

Other Contributor(s)

Andrew Pfeiffer, Sina Nazeri

Changelog

Date	Version	Changed by	Change Description
2023-07-06	0.1	Abhishek Gagneja	Initial version created
2023-07-10	0.2	Andrew Pfeiffer	Documented in AWB

© IBM Corporation 2023. All rights reserved.