**Module 1 Summary: Python Coding Practices and Packaging Concepts**

Congratulations! You have completed this module. At this point, you know that:

* The application development lifecycle has seven phases, including:
* Requirement Gathering: You collect user, business, and technical requirements for the app
* Analysis: You analyze the requirements
* Design: You design the complete solution
* Code and test: You build and test the different components of the app
* User and system test: Users test the app for usability, and you perform system integration testing and performance testing
* Production: The application is available to all end users
* Maintenance: You upgrade or fix any user or system issues
* All web apps are APIs, but not all APIs are web apps. Both share data between apps, but not all APIs require networks like web apps do.
* The PEP8 guidelines for code readability include the following:
* Four spaces for indentation
* Blank lines to separate functions and classes
* Spaces around operators and after commas
* The PEP8 coding conventions for consistency and manageability include:
* 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
* To ensure that your code adheres to the predefined style and standard without executing the code, you can use the Static code analysis method.
* Unit testing is a method to validate if code units are operating as designed. You must test every unit before integration with the final codebase.
* To create a package:
* Create a folder with the package name
* Create an empty \_\_init\_\_.py file
* Create the required modules
* In the \_\_init\_\_.py file, add code to reference the modules needed in the package
* You can verify the package via the bash terminal in a Python shell.