**Module 7: Discussion Forum**

Working with Python, you could either use a predefined function/method or write a user-defined function/method. What are three criteria that you would use to determine whether to use predefined or user-defined functions/methods? Discuss your rationale in your post. Lastly, provide an example of your method declaration and return type.

**Predefined functions** are built-in functions provided by the programming language to simplify operations on **data structures, data types, date and time, and more**. These functions are designed with a **general-purpose approach**, considering various use cases and users. Since they are part of the language, they are **highly optimized for performance and memory efficiency**, making them reliable for use in different applications.

On the other hand, **user-defined functions** are crucial for addressing **business-specific requirements**. Developers often leverage predefined functions as building blocks to handle basic operations and extend their functionality by defining custom logic within user-defined functions. This approach enhances code **reusability, modularity, and maintainability**, ensuring that the solution meets specific user needs effectively.

**Example of defining User defined function by leveraging the predefined functtion**

In the example below, we utilize the predefined **Base64** **encode/decode** functions within our user-defined functions (**userdef\_encode and userdef\_decode**). We enhance security by incorporating a business-defined secret into the actual password before encoding.

The use cases for user-defined functions are limitless, as they allow us to extend and customize predefined functions to meet specific business requirements.

A screenshot of a computer program

AI-generated content may be incorrect.

**Some of the examples for pre-defined functions are**

Print(), Len(), sorted()

List functions: append, insert, pop, get

Datetime function

String function