1. What are the new features added in Python 3.8 version?

Ans:

* Assignment Expressions (the "walrus" operator)
* Positional-only parameters
* The 'f-strings' = specifier
* The 'functools' enhancements
* Improved 'math' module
* SyntaxWarning for "f-string without placeholders"

1. What is monkey patching in Python?

Ans: Monkey patching in Python refers to the dynamic modification of a class or module at runtime. It allows developers to change or extend the behavior of libraries, modules, or classes without altering their original source code. This technique is often used to fix bugs, add features, or modify the behavior of third-party libraries or modules without directly altering their source code.

1. What is the difference between a shallow copy and deep copy?

Ans: the main distinction is that a shallow copy only creates copies of the top-level objects, while a deep copy creates copies of all the nested objects as well. The choice between the two depends on the specific use case and the structure of the objects you are working with.

1. What is the maximum possible length of an identifier?

Ans: In Python, the maximum possible length of an identifier is not explicitly defined. However, according to the language specification, PEP 8 (Style Guide for Python Code), the recommended maximum length for an identifier is 79 characters. This guideline is in place to ensure code readability and maintainability.

1. What is generator comprehension?

Ans: A generator comprehension in Python is a concise way to create a generator. Similar to list comprehensions, generator comprehensions allow you to create a generator on the fly using a single line of code. Generators are a type of iterable that can be used to iterate over a sequence of values without storing them in memory all at once.