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

Ans1- Python 3.8 introduced several new features, including the "walrus operator" (:=) for inline assignment in expressions, the f-strings improvements for formatted string literals, the \_\_future\_\_ module for forward compatibility, positional-only parameters, and more precise type hinting with TypedDict and Final. It also brought enhancements to existing functions and modules, making Python code more concise and readable

1. What is monkey patching in Python?

Ans2- Monkey patching in Python refers to the practice of dynamically modifying or extending the behavior of existing classes or modules during runtime. It involves adding, modifying, or replacing methods or attributes of classes or modules at runtime, often for temporary fixes or to add functionality without altering the original source code.

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

Ans3- Shallow Copy: A shallow copy of an object creates a new object but does not recursively copy the objects contained within it. Instead, it references the same objects. Changes to nested objects are reflected in both the original and the copy.

Deep Copy: A deep copy of an object creates a new object and recursively copies all objects contained within it, including nested objects. It results in a completely independent copy where changes to nested objects do not affect the original.

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

Ans4- the maximum length of an identifier (e.g., variable or function name) is implementation-specific, but it is typically limited to a practical length that ensures readability and usability, it allow identifiers to be up to 255 characters long.

5.What is generator comprehension?

Ans5- Generator comprehension is a concise way to create generator objects in Python. It uses a similar syntax to list comprehensions but with parentheses () instead of square brackets []. Generator comprehensions allow you to generate values lazily, one at a time, as they are needed, which can be memory-efficient for large datasets.