

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

**Ans:**

- Assignment expressions - “the walrus operator” := assigns values to variables as part of a larger expression.
- Positional-only parameters - new function parameter syntax / indicating that some function parameters must be specified positionally and cannot be used as keyword arguments.
- yield and return statements do not require parentheses to return multiple values.
- Dict comprehensions have been modified so that the key is computed first and the value second.
- importlib\_metadata is a new library added that provides an API for accessing an installed package's metadata.
- In the three-argument form of pow(), when the exponent is -1, it calculates the modular multiplicative inverse of the given value
- The csv.DictReader now returns instances of dictionary instead of a collections.OrderedDict.

2. What is monkey patching in Python?

**Ans:** Monkey patching refers to making dynamic (or run-time) modifications to a class or module.

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

**Ans:** When an object is copied using copy(), it is called shallow copy as changes made in copied object will also make corresponding changes in original object, because both the objects will be referencing the same address location.

When an object is copied using deepcopy(), it is called deep copy as changes made in the copied object will not make corresponding changes in the original object, because both the objects will not be referencing the same address location.

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

**Ans:** Python, particularly when combined with identifiers, is case-sensitive.

When writing or using identifiers in Python, it has a maximum of 79 characters.

Unlikely, Python gives the identifiers unlimited length.

However, the layout of PEP-8 prevents the user from breaking the rules and includes a 79-character limit.

5. What is generator comprehension?

**Ans:** A generator comprehension is a single-line specification for defining a generator.