

How to generate a version 4 UUID with Python

Universally Unique Identifiers (UUIDs) are used in many contexts to uniquely identify resources or entities. Python provides native support for UUID generation through the `uuid` module. In this article, we will see how to generate a version 4 UUID, which is one of the most commonly used versions.

A version 4 UUID is a completely randomly generated unique identifier. Unlike other versions of UUIDs that can be based on parameters such as the MAC address of the device or the time, version 4 is based only on random numbers. This makes it particularly useful when you want to avoid collisions and need a unique identifier that does not depend on external factors.

To generate a UUID in Python, the first step is to import the `uuid` module. This module is included in the Python standard library, so there is no need to install additional packages. Then just use the `uuid4()` function from the `uuid` module.

```
import uuid

# Generate a version 4 UUID
uuid_v4 = uuid.uuid4()

print(uuid_v4)
```

Conclusion

Generating a version 4 UUID in Python is easy with the `uuid` module. This version of UUID is ideal when you need a unique and random identifier. It is important to remember that even though UUIDs are designed to be unique, there is a small chance of collision, but for most practical applications, this probability is negligible.