Python Report

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What is the super() Function in Python?

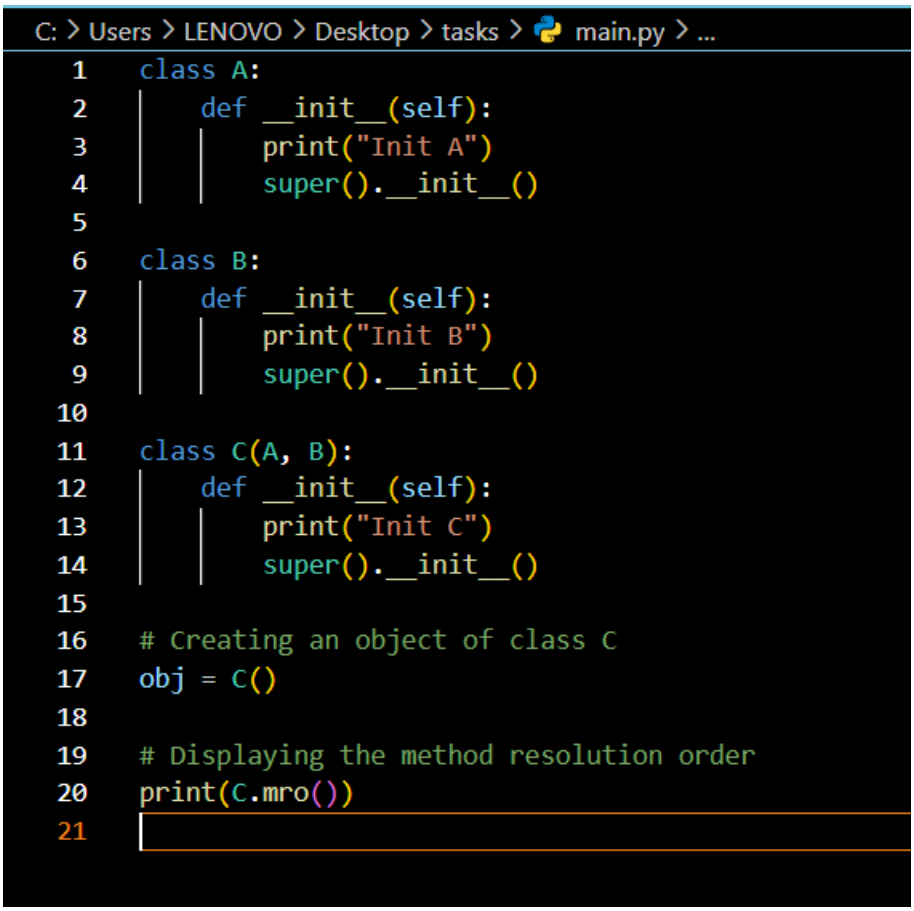
The super() function in Python is used to call methods from a parent (or superclass) in a class hierarchy. It is commonly used within the __init__ method (constructor) or when overriding methods, ensuring that all necessary initializations in the inheritance chain are properly executed.

This function provides a straightforward way to access inherited methods, helping to maintain clean and manageable code when working with class hierarchies.

Why is super() Essential in Multiple Inheritance?

In cases of multiple inheritance—where a class inherits from more than one parent class—super() follows the Method Resolution Order (MRO) to decide the sequence in which methods are called. This mechanism avoids duplicate calls and ensures that each class's method is executed only once, in a consistent and predictable order.

Example:



Explanation:

In the example above, class C inherits from both A and B. Each class's constructor prints a message and calls super().__init__() to ensure that other constructors in the inheritance chain are executed. When an instance of C is created, Python determines the proper method call order using the MRO and initializes the classes accordingly.