**Singleton Pattern Implementation**

OUTPUT SCREENSHOT



CODE ANALYSIS

The Logger class in the code contains a private static Logger variable, instance, such that it cannot be accessed by any external class member as well as only one copy of it exists in Logger, thus, making it the singleton.

Logger also contains a private constructor and a public method for lazy initialization of the instance and returning it.

Now, the Demo class, which contains the main method for commencing the code execution, takes 2 Logger variables and assign them to receive an instance from Logger.

The code checks whether these 2 instances are the same or not. As the output received is true, it can be said that singleton pattern has been implemented.

INFERENCE

Thus, the Logger class, with a private constructor, a single private instance created through lazy initialization and allowed global access, implements the singleton design pattern.