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🚀 From .Net C# technical interview: Unique Identifier🧠💡

🔍 Challenge: Develop a system to generate unique identifiers across multiple application instances in a multi-threaded environment. Your mission, should you choose to accept it, is to ensure these identifiers are unique and generated efficiently without stepping on each other's toes. 🤖🤝

Steps for Solution

1) Understand the Requirements: Realize the necessity for unique identifiers to be unique not only in a single instance but across multiple instances possibly running on different machines🔍.

2) Research UUIDs: Look into universally unique identifier (UUID) standards and how they ensure uniqueness across distributed systems 🗄️.

3) Thread Safety: Implement a method to generate these identifiers that is thread-safe, ensuring that concurrent access by multiple threads does not lead to duplicate identifier generation🤝.

4) Optimization: Consider the performance implications of your solution. Ensure it is optimized for fast execution, given that it might be called frequently ⚡👊.

What Knowledge Will Be Validated:

- Understanding of thread safety and concurrency in .NET. 🔒
- Knowledge of distributed systems and how to generate unique identifiers across them. 🆔
- Ability to write optimized and efficient C# code. 🚀
- Proficiency in writing unit tests in C# to validate code functionality. ✅

Github repo: https://lnkd.in/dJjZCBWY

#DotNet #CSharp #ProgrammingPuzzles #Concurrency

#ThreadSafety #SoftwareDevelopment #CodingChallenge

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