

Lazy Initialization Solutions

Lazy initialization

- What is meant by lazy initialization?
 - Lazy initialization means that a variable is not initialized until the first time it is used
 - Usually we use "eager" initialization, in which a variable is initialized when it is declared
- Give an example of a situation where lazy initialization could be useful
 - Lazy initialization can be useful when constructing an object is "expensive"
 - e.g. allocating large amounts of memory, connecting to a network

Thread-safe Lazy Initialization

- Is lazy initialization safe to use in multi-threaded code?
 - Yes, provided we prevent data races
 - Efficiency may be a concern (similar to single writer, multiple reader)