Summary of Java (Common)
Fork-Join Pool Benefits

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Learning Objectives in this Part of the Lesson

- Understand how the common fork-join pool helps to maximize processor core utilization
- Recognize how the ManagedBlocker interface helps avoid starvation & improve performance
- Be able to apply the ManagedBlocker interface on blocking synchronizers & queues
- Know how to encapsulate ManageBlocker & apply it on blocking I/O operations
- Be aware of the benefits of the Java (common) fork-join pool
Benefits of the Java Fork-Join Pool
There are several benefits of the Java fork-join pool vs. other Java thread pools.

See docs.oracle.com/javase/tutorial/essential/concurrency/pools.html
There are several benefits of the Java fork-join pool vs. other Java thread pools:

- Locality of reference
- Improves cache performance

Benefits of the Java Common Fork-Join Pool

- There are several benefits of the Java fork-join pool vs. other Java thread pools
  - Locality of reference
  - Recursive decomposition
  - Larger chunks are pushed onto the deque before smaller chunks

See developer.ibm.com/articles/j-java-streams-5-brian-goetz
There are several benefits of the Java fork-join pool vs. other Java thread pools:

- Locality of reference
- Recursive decomposition
- Work-stealing
  - To maximize core utilization, idle worker threads “steal” work from the tail of busy threads’ deques

See gee.cs.oswego.edu/dl/papers/fj.pdf
Benefits of the Java Common Fork-Join Pool
Benefits of the Java Common Fork-Join Pool

- There are also several benefits of the Java common fork-join pool vs. other Java thread pools
  - Optimized resource utilization
    - It’s aware of which cores are used globally within a process
Benefits of the Java Common Fork-Join Pool

- There are also several benefits of the Java common fork-join pool vs. other Java thread pools
  - Optimized resource utilization
  - Auto-scaling via the Managed Blocker interface
  - Temporarily add worker threads to the common fork-join pool

End of Summary of Java (Common) Fork-Join Pool Benefits