The Java Executor Framework:
The Java Executors Class

Douglas C. Schmidt
d.schmidt@vanderbilt.edu
www.dre.vanderbilt.edu/~schmidt

Professor of Computer Science
Institute for Software Integrated Systems
Vanderbilt University
Nashville, Tennessee, USA
Learning Objectives in this Part of the Lesson

• Understand the purpose of the Java executor framework
• Recognize the features & benefits of thread pools
• Note a human known use of thread pools
• Know the Java Executor framework thread pools
• Learn the key interfaces the framework provides
• Appreciate the factory methods provided by the Java Executors class
The Java Executors Class
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- Executors is a utility class that creates executor implementations.

See [docs.oracle.com/javase/8/docs/api/java/util/concurrent/Executors.html](docs.oracle.com/javase/8/docs/api/java/util/concurrent/Executors.html)
The Java Executors Class

- Executors is a utility class that creates executor implementations.
- A utility class is a final class having only static methods, no (non-static) state, & a private constructor.

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A utility class is a final class having only static methods, no (non-static) state, & a private constructor.

Utility classes are largely a vestige of early versions of Java that lacked default methods in interfaces.

See www.vojtechruzicka.com/avoid-utility-classes
The Executors utility class has factory methods that create desired executors.

See en.wikipedia.org/wiki/Factory_method_pattern
The Executors utility class has factory methods that create desired executors, e.g., cached, fixed, work-stealing thread pools, etc.
There's a default thread factory

See [docs.oracle.com/javase/8/docs/api/java/util/concurrent/Executors.html#defaultThreadFactory](http://docs.oracle.com/javase/8/docs/api/java/util/concurrent/Executors.html#defaultThreadFactory)
The Java Executors Class

- The Executors utility class also has a factory method that can be used to create new threads.
- The DefaultThreadFactory implements the Thread Factory interface.

See docs.oracle.com/javase/8/docs/api/java/util/concurrent/ThreadFactory.html
The Executors utility class also has a factory method that can be used to create new threads.

- The DefaultThreadFactory implements the ThreadFactory interface.
- Many Executors factory methods use the default thread factory.

See docs.oracle.com/javase/8/docs/api/java/util/concurrent/Executors.html#defaultThreadFactory
The Java Executors Class

- The Executors utility class also has a factory method that can be used to create new threads
  - The DefaultThreadFactory implements the Thread Factory interface
  - You can also define custom thread factories & pass them to factory methods

See howtodoinjava.com/java/multi-threading/creating-threads-using-java-util-concurrent-threadfactory
End of the Java Executors Framework: The Java Executors Interface