Module java.base

Package java.lang

java.lang.Thread.State

Enclosing class: Thread

Since: 1.5

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public static enum Thread.State extends Enum<Thread.State>

A thread state. A thread can be in one of the following states:

- NEW
  A thread that has not yet started is in this state.
- RUNNABLE
  A thread executing in the Java virtual machine is in this state.
- BLOCKED
  A thread that is blocked waiting for a monitor lock is in this state.
- WAITING
  A thread that is waiting indefinitely for another thread to perform a particular action is in this state.
- TIMED_WAITING
  A thread that is waiting for another thread to perform an action for up to a specified waiting time is in this state.
- TERMINATED
  A thread that has exited is in this state.

A thread can be in only one state at a given point in time. These states are virtual machine states which do not reflect any operating system thread states.

Enum Constant Details

NEW

public static final Thread.State NEW

Thread state for a thread which has not yet started.

RUNNABLE

public static final Thread.State RUNNABLE

Thread state for a runnable thread. A thread in the runnable state is executing in the Java virtual machine but it may be waiting for other resources from the operating system such as processor.

BLOCKED

public static final Thread.State BLOCKED

Thread state for a thread blocked waiting for a monitor lock. A thread in the blocked state is waiting for a monitor lock to enter a synchronized block/method or reenter a synchronized block/method after calling Object.wait.

WAITING

public static final Thread.State WAITING

Thread state for a waiting thread.

A thread is in the waiting state due to calling one of the following methods:

- Object.wait with no timeout
- Thread.join with no timeout
- LockSupport.park

A thread in the waiting state is waiting for another thread to perform a particular action. For example, a thread that has called Object.wait() on an object is waiting for another thread to call Object.notify() or Object.notifyAll() on that object. A thread that has called Thread.join() is waiting for a specified thread to terminate.

TIMED_WAITING

public static final Thread.State TIMED_WAITING

Thread state for a waiting thread with a specified waiting time. A thread is in the timed waiting state due to calling one of the following methods with a specified positive waiting time:

- Thread.sleep

- Object.wait with timeout
- Thread.join with timeout
- LockSupport.parkNanos
- LockSupport.parkUntil

TERMINATED

public static final Thread.State TERMINATED

Thread state for a terminated thread. The thread has completed execution.