**Daemon Thread in Java**

**Daemon thread in java** is a service provider thread that provides services to the user thread. Its life depend on the mercy of user threads i.e. when all the user threads dies, JVM terminates this thread automatically.

There are many java daemon threads running automatically e.g. gc, finalizer etc.

You can see all the detail by typing the jconsole in the command prompt. The jconsole tool provides information about the loaded classes, memory usage, running threads etc.

***Points to remember for Daemon Thread in Java***

* It provides services to user threads for background supporting tasks. It has no role in life than to serve user threads.
* Its life depends on user threads.
* It is a low priority thread.

***Why JVM terminates the daemon thread if there is no user thread?***

The sole purpose of the daemon thread is that it provides services to user thread for background supporting task. If there is no user thread, why should JVM keep running this thread. That is why JVM terminates the daemon thread if there is no user thread.

***Methods for Java Daemon thread by Thread class***

The java.lang.Thread class provides two methods for java daemon thread.

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| **No.** | **Method** | **Description** |
| 1) | public void setDaemon(boolean status) | is used to mark the current thread as daemon thread or user thread. |
| 2) | public boolean isDaemon() | is used to check that current is daemon. |

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| **package** com.company;  **import** java.io.\*; **import** java.util.Scanner;  **public class** Main {   **public static void** main(String[] args){  Multis t1 = **new** Multis();  Multis t2 = **new** Multis();  Multis t3 = **new** Multis();   t1.setDaemon(**true**);  t1.start();  t2.start();  t3.start();  } } | **package** com.company;  **import** java.util.Date;  **public class** Multis **extends** Thread{   **public void** run(){  **if** (Thread.*currentThread*().isDaemon()){  System.***out***.println(**"Daemon thread is at work"**);  } **else** {  System.***out***.println(**"user thread is at work"**);  }  } } |
| **Daemon thread is at work**  **user thread is at work**  **user thread is at work** | |

#### **Note: If you want to make a user thread as Daemon, it must not be started otherwise it will throw IllegalThreadStateException.**

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| **package** com.company;  **import** java.io.\*; **import** java.util.Scanner;  **public class** Main {   **public static void** main(String[] args){  Multis t1 = **new** Multis();  Multis t2 = **new** Multis();  Multis t3 = **new** Multis();   t1.start();  t1.setDaemon(**true**);  t2.start();  t3.start();  } } | Exception in thread "main" java.lang.IllegalThreadStateException  at java.base/java.lang.Thread.setDaemon(Thread.java:1458)  at com.company.Main.main(Main.java:14)  user thread is at work |