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Thread class methods (Part 2) in Java

=> Thread class methods :-

4. Priority Based Methods :

- ➔ getPriority() - This method is used to get the priority of the thread
- ➔ setPriority(int priority) - This method is used to set the priority of the thread

5. Prevent thread execution method :-

- ➔ sleep(long mili) - This method is used to pause the current running thread for the provided time period
- ➔ yield() - This method is used to stop the current running thread execution and provide the chance to another thread for execution
- ➔ join() -

=> What is thread priority :-

- ➔ Thread priority is an integer value of the thread, the thread having high priority or high integer value will get the priority first to execute by JVM.
- ➔ Priority integer value ranges from 1 to 10.
- ➔ Java provides 3 pre-defined priorities :-
  - 1 - MIN_PRIORITY
  - 5 - NORM_PRIORITY
  - 10 - MAX_PRIORITY
- ➔ Below are not priorities :-
  - 0, <1, >10 (these priorities will provide an exception saying java.lang.IllegalArgumentException)
  - LOW_PRIORITY, MINIMUM_PRIORITY
  - NORMAL_PRIORITY, MIDIUM_PRIORITY
  - MAXIMUM_PRIORITY, HIGH_PRIORITY

➔ **NOTE :**

1. Priorities depends on the platform (Windows does not support thread priorities)
2. By default main thread has priority 5
3. Thread default priorities are inherited by parent thread (It also depends on the platform)
4. If multiple threads have same priority then which thread will get the chance to execute first depends on the JVM (thread schedular)

=> sleep() method :

➔ This method is used to pause the current running thread for the provided time period

➔ sleep() method is static method thus we have to call it by class name i.e. Thread class

- ➔ sleep() methods throws InterruptedException thus we have to use throws keyword or "try-catch block"
- ➔ We can provide time as 0 but it cannot be negative integer value (java.lang.IllegalArgumentException)
- ➔ JVM does not provide the guarantee that the sleeping thread will invoke exactly after provided time period
- ➔ When the thread goes into sleeping stage then it doesnt release the lock

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=> yield() method :-

- ➔ This method stops the current thread execution and provide the chance to the other thread to execute
- ➔ Output is not constant in case of yield() method

➔ NOTE :-

- Till JDK 5 version, yield() method internally calls the sleep() method
- After JDK 5 version, yield() method working has been changed. It provides the hint to the thread schedular to yield(stop), but it totally depends on the thread-schedular that it will accept its request or not.
- If current running thread is stoped or yield, then which thread will get the chance for execution depends on the thread-schedular

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