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Assignment_10

Code:

```java
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// Write a Java Program for Thread Creating and use of its various methods.


import java.lang.Thread;
import java.lang.Runnable;

public class As_10 implements Runnable {
    public static void main(String[] args) {
        // Create a new As_10 object
        As_10 example = new As_10();

        // Create a new thread with the Runnable object
        Thread thread = new Thread(example);

        // Start the thread
        thread.start();

        // Call various Thread methods
        System.out.println("-> Main thread starting...");
        System.out.println("-> New thread created: " + thread.getName());
        System.out.println("-> New thread ID: " + thread.getId());
        System.out.println("-> New thread priority: " + thread.getPriority());

        // Sleep for 1 seconds
        try {
            System.out.println("-> Main thread is sleeping...");
            Thread.sleep(1000);
            System.out.println("-> Main thread is awake!");
        } catch (InterruptedException e) {
            e.printStackTrace();
        }

        // Interrupt the new thread
        thread.interrupt();
        System.out.println("-> New thread interrupted: " + thread.isInterrupted());

        // Set thread priority to 7
        thread.setPriority(7);
        System.out.println("-> New thread priority (after setting): " + thread.getPriority());

        // Yield the main thread
        Thread.yield();
        System.out.println("-> Main thread yielded...");

        try {
            // Wait for the thread to complete
            thread.join();
            System.out.println("-> New thread completed.");
        } catch (InterruptedException e) {
            e.printStackTrace();
        }

        System.out.println("-> Main thread ending...");
    }
```

```
    @Override
    public void run() {
        // The code that runs in the new thread
        System.out.println("-> New thread is running...");

        // Sleep for 1 seconds
        try {
            System.out.println("-> New thread is sleeping...");
            Thread.sleep(1000);
            System.out.println("-> New thread is awake!");
        } catch (InterruptedException e) {
            e.printStackTrace();
        }
    }
}
```

Output:

```
-> Main thread starting...
-> New thread is running...
-> New thread created: Thread-0
-> New thread is sleeping...
-> New thread ID: 23
-> New thread priority: 5
-> Main thread is sleeping...
-> Main thread is awake!
-> New thread is awake!
-> New thread interrupted: true
-> New thread priority (after setting): 5
-> Main thread yielded...
-> New thread completed.
-> Main thread ending...
```