

1. Write a program that has a class MyTask, which extends the Runnable Interface. This class has two attributes: threadName: String and t:Thread. The constructor has an argument of type String that sets the name of the created thread. Define the start() method, so if the attribute t is null, a new thread object is created and started. The run() method of this class prints on the console the message “Hello World i”, where i takes values from 0 to 9. Create two objects of the class MyTask and execute their run. Can you explain the output of this program?

The threads run both run() methods and are run side by side.

What is the output of this program if in every iteration the thread sleeps for 1 second?

They print the same number, both wait the same amount of time and prints the next number
Why?

Because they run in a parallel and both wait the one second.

2. Create a new project in your IDE and import the class “TestThread” (you have to download it from Moodle). Run the program several times and observe the output. What is the output of the program?

Prints out a counter from 5 to 0. Starts both threads and counts down to 1 randomly.

Modify the program so that it produces the same result every time we run it.

Modifying the synchronized keyword in front of the printCount() method.

3. Create a new project in your IDE and import the class “ThreadClassDemo” (you have to download it from Moodle). Run the program several times and observe the output. What will happen if we remove the line “thread1.setDaemon(true);”?

Both threads will continue to run endlessly until program is terminated, as Daemon ignores the JVM thread termination.

Why?

Stated above.

How is the output of the program affected by removing the line thread2.setPriority(Thread.MIN_PRIORITY); and why”?

It loops when “thread1.setDaemon(true);” and thread2.setPriority(Thread.MIN_PRIORITY); is deleted, until it is forced to stop. By deleting thread2.setPriority(Thread.MIN_PRIORITY); the second thread priority is set to the default value, which is 5.