**Part 4: Thread Pooling**

import java.util.concurrent.ExecutorService;

import java.util.concurrent.Executors;

public class ThreadPoolExample {

// Task class implements Runnable

static class Task implements Runnable {

private int taskId;

public Task(int taskId) {

this.taskId = taskId;

}

@Override

public void run() {

System.out.println("Task " + taskId + " is being processed by " +

Thread.currentThread().getName());

}

}

public static void main(String[] args) {

// Create a thread pool with 3 threads

ExecutorService executorService = Executors.newFixedThreadPool(3);

// Submit tasks to the pool

for (int i = 1; i <= 5; i++) {

executorService.submit(new Task(i));

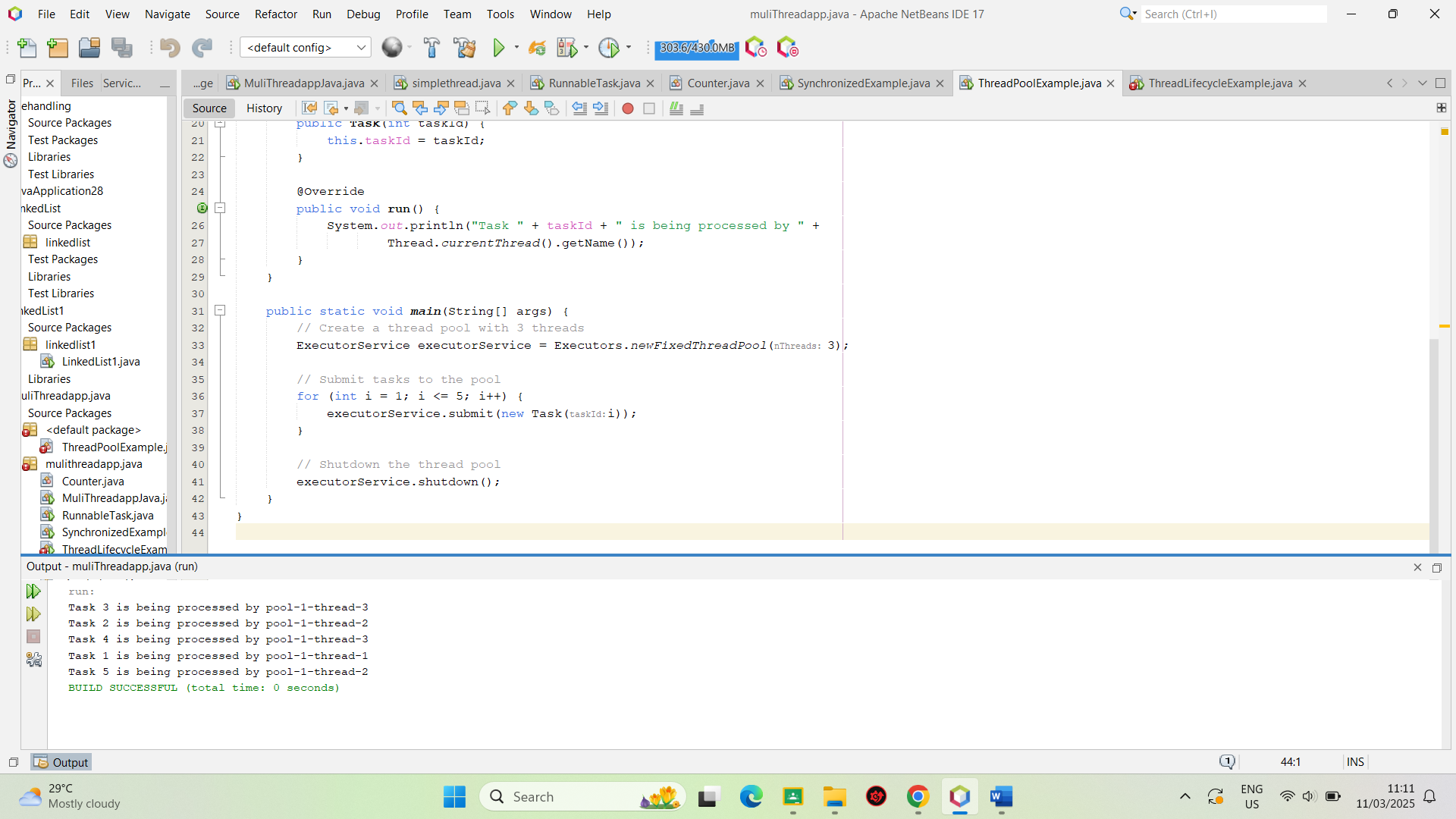
}

// Shutdown the thread pool

executorService.shutdown();

}

}

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