**4. Using Executor Service for Thread Pooling**

package threadpoolexample;

import java.util.concurrent.ExecutorService;

import java.util.concurrent.Executors;

public class Threadpoolexample {

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();

}

package threadpoolexample;

import java.util.concurrent.ExecutorService;

import java.util.concurrent.Executors;

public class task implements Runnnable {

private int taskId;

public task(int taskId){

this.taskId=taskId;

}

public void run() {

System.out.println("Task " + taskId + " is being processed by " +Thread.currentThread().getName());

}

Output:

