

Simple Multithreading Assignment (For Interns)

Assignment Title: Multithreaded File Processing System

Objective:

This assignment helps interns understand basic multithreading concepts in Java, including threads, Runnable, and ExecutorService.

Problem Statement:

You are given multiple files (simulated using file names). Each file takes some time to process. The files should be processed in parallel using multithreading.

Requirements:

- Process 10 files
- Each file takes 2 seconds to process
- Use only 3 threads
- Print file name and thread name during processing
- Use Runnable and ExecutorService
- Do not use Thread.sleep() in main method

Suggested Class Structure:

- FileTask implements Runnable
- MainApp

Sample Output:

```
Processing file1.txt by pool-1-thread-1
Processing file2.txt by pool-1-thread-2
Processing file3.txt by pool-1-thread-3
```

Bonus Tasks (Optional):

- Print total execution time
- Add task number
- Replace file processing with number processing