

## Chapter 13 Multi-threading in Java by Munawar

Multiprocessing and multi-threading both are used to achieve multitasking.

Process1

Process2

Process3

OS

Thread1

Thread2

Process

### In a nut shell.....

Threads use shared memory area.

Threads ----- > Faster context switching.

A Thread is light weight whereas a process is heavy weight.

For Example:

A word processor can have one thread running in foreground as an editor and another in the background auto saving the document.

### Flow of control in Java

#### 1. without threading:

Main () =====> Func1 () === > Func2== > Func3 ===== > END

## 2. with threading:

Main () =====> Func1 ()

==== > Func2== > END

===== > Func3 ()

## Creating a Thread

There are two ways to create a thread in Java.

1. By Extending thread class
2. By implementing Runnable interface

## Source Code

```
import javax.swing.plaf.synth.SynthTextAreaUI;
import java.util.Scanner;
import java.util.Random;

public class Main {
    public static void main (String [] args) {

        // Only theory discuss

    }
}
```

Thank You