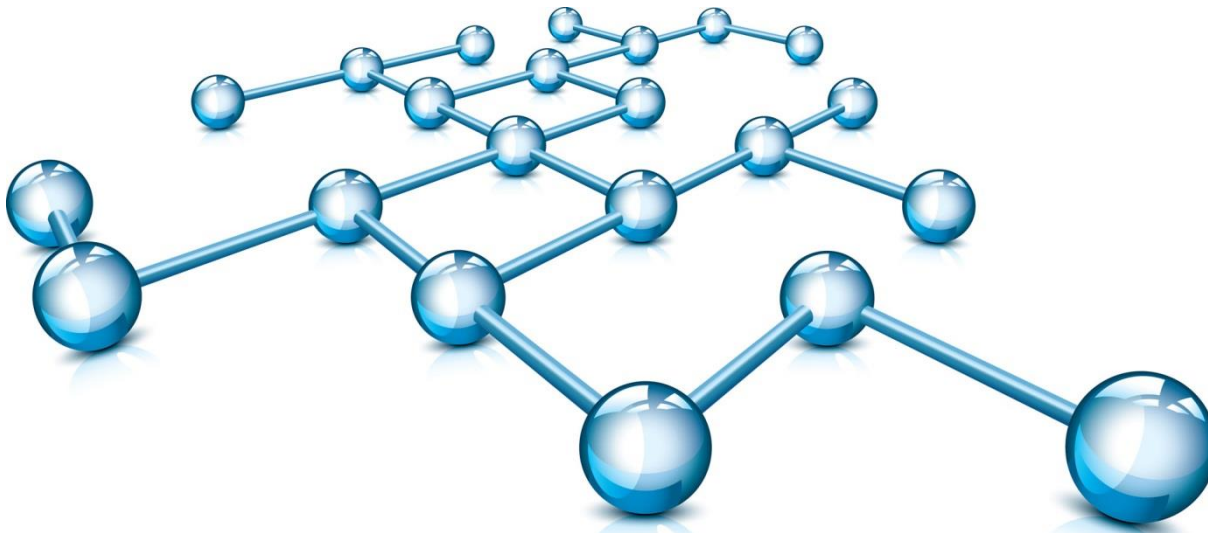


Breve tutorial de Hilos en Java

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Maneras de definir un Hilo










implements Runnable



extends Thread



Tejiendo con mis primeros hilos

- ▼  **hilos** C:\Users\Octavio\IdeaProjects\hilos
 - >  .idea
 - ▼  src
 - ▼  mx.itam.packages.threads
 -  Counter
 -  HelloRunnable
 -  HelloThread
 -  **Hilos**
 -  SynchronizedThread

Hilos



Implementando Runnable



```
public class HelloRunnable implements Runnable {
```

```
    public void run() {  
        System.out.println("Hola");  
    }
```

```
}
```

Se ejecuta con método **start()**

Extendiendo Thread



```
public class HelloThread extends Thread {  
  
    public void run() {  
        System.out.println("Hola");  
    }  
  
}
```

También se ejecuta con método **start()**

Creando los hilos



```
HelloThread hilo1 = new HelloThread();
```

```
Thread hilo2 = new Thread(new HelloRunnable());
```

```
hilo1.start();
```

```
hilo2.start();
```

Un poco de manejo de hilos

- Detener hilos `Thread.sleep(milisegundos)`
- Esperar hilos `join()` o `join(milisegundos)`
- Nombre `Thread.currentThread().getName()`
- Sincronizar `synchronized`

Creando hilos con “regiones críticas”



```
Counter aCounter;
```

```
aCounter = new Counter(0);
```

```
SynchronizedThread hilo3 = new SynchronizedThread(aCounter);
```

```
SynchronizedThread hilo4 = new SynchronizedThread(aCounter);
```

```
hilo3.start();
```

```
hilo4.start();
```


Código ejemplo de concurrencia sincronizada

```
public class SynchronizedThread extends Thread {
```

```
    private Counter counter;
```

```
    public SynchronizedThread(Counter counter) {  
        this.counter = counter;  
    }
```

```
    @Override  
    public void run() {  
        counter.increaseAndPrint(Thread.currentThread().getName());  
    }  
}
```

```
public class Counter {  
    private int count = 0;
```

```
    public Counter(int count){  
        this.count = count;  
    }
```

synchronized

```
    public void increaseAndPrint(String hiloId) {  
        for (int i = 0; i < 1000; i++){  
            count++;  
            System.out.println(count + " " + hiloId);  
        }  
    }  
}
```