

### i. y ii. iii. Ejecución de los hilos con start()

The screenshot shows a Java development environment with two tabs open: `CountThreadsMain.java` and `CountThread.java`. The `CountThreadsMain.java` tab is active, displaying the following code:

```
public class CountThreadsMain {
    public static void main(String a[]){
        CountThread thread1 = new CountThread(A: 0, B: 99);
        CountThread thread2 = new CountThread(A: 99, B: 199);
        CountThread thread3 = new CountThread(A: 200,B: 299);

        thread1.start();
        thread2.start();
        thread3.start();
    }
}
```

The `CountThread.java` tab contains the following code:

```
public class CountThread extends Thread {
    int A;
    int B;

    public CountThread(int A, int B) {
        this.A = A;
        this.B = B;
    }

    public void run() {
        for (int i = A; i < B; i++) {
            System.out.println(i);
        }
    }
}
```

Below the code editor, the terminal tab is active, showing the following output:

```
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
200
```

Evidencias:

- Los valores no salen en orden.
- Los rangos se mezclan.
- Lo que quiere decir es que los tres hilos se están ejecutando concurrentemente, ya que cada hilo pasa de estado NEW a RUNNABLE. Provocando así una salida intercalada.

#### iv. Ejecución de los hilos con run()

The screenshot shows a Java development environment with two open files: `CountThreadsMain.java` and `CountThread.java`. The `CountThreadsMain.java` file contains the following code:

```
1  CountThreadsMain.java M X  J CountThread.java  README.md
src > main > java > edu > esci > arsw > threads > J CountThreadsMain.java > ...
11  public class CountThreadsMain {
12      public static void main(String a[]){
13          CountThread thread1 = new CountThread(A: 0, B: 99);
14          CountThread thread2 = new CountThread(A: 99, B: 199);
15          CountThread thread3 = new CountThread(A: 200,B: 299);
16
17          thread1.run();
18          thread2.run();
19          thread3.run();
20
21      }
22
23
24 }
```

The `TERMINAL` tab shows the following output:

```
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
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44
45
46
47
48
49
```

Evidencias: Al reemplazar start() por run(), no se crean hilos nuevos y el código se ejecuta secuencialmente en el hilo principal, generando una salida ordenada.

- Start() → Crea un nuevo hilo y ejecuta el método run().
- Run() → No crea un hilo nuevo, no hay concurrencia.