

Course Name: A Level (2nd Sem)

Topic : Multithreading in Java

Subject: JAVA

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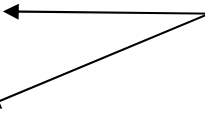
The join() method:

java.lang.Thread class provides the join() method which allows one thread to wait until another thread completes its execution. In simpler words, it means it waits for the other thread to die.

```
public class J1 extends Thread{
    Public void run(){
        for(int i=1;i<=5;i++){
            try{
                Thread.sleep(500);
            }
        }
    }
    catch(Exception e)
    {
        System.out.println(e);
    }
    System.out.println(i);
}

public static void main(String args[]){
    J1 t1=new J1();
    J1 t2=new J1();
    J1 t3=new J1();
    t1.start();
    try{
        t1.join();
    }
    catch(Exception e)
    {
        System.out.println(e);
    }

    t2.start();
    t3.start();
}
```



t1 is first started and joined
hence t1 task will be executed
completely ,then only t2 and t3
will be executed.

Join method has a void type and throws InterruptedException. Joining threads in Java has three methods namely:

1. join()
2. join(long millis)
3. join(long millis, int nanos)

Can we start a Thread twice in Java?

No, once a thread is started, it can never be started again. Doing so will throw an **IllegalThreadStateException**.

```
public class M1 extends Thread{
    public void run(){
        System.out.println("running thread..");
    }
    public static void main(String args[]){
        M1 t1=new M1();
        t1.start();
        t1.start();
    }
}
```

Exercise:

1. Why is join method used in thread? What are its benefits? Explain.
2. Can we start a thread twice? What will happen then?