

## Synchronization Program in Java

//First implement the program without synchronized kw

//Implement by making credit() method synchronized

//Implement by using synchronized block

```
class account{
    int balance;
    account(){
        balance=5000;
    }
    void credit(int n) throws InterruptedException{
        System.out.println(" Balance before credit is: "+balance);
        int b=balance;
        Thread.sleep(500);
        balance=b+n;
        System.out.println("Balance after credit is: "+balance);
    }
    void disBal(){
        System.out.println("Final balance is: "+balance);
    }
}
```

```
class Thread1 implements Runnable{
    Thread t;
    account a;
```

```

int c;
String thName;
Thread1(String thName,account a,int c){
    this.thName=thName;
    this.a=a;
    this.c=c;
    t=new Thread(this);
}
public void run(){

    System.out.println("In Thread: "+thName);
    try{
        a.credit(c);
    }
    catch(InterruptedException e){
        System.out.println("Main thread interrupted");
    }
}
}

```

```

class ThreadsTest{
    public static void main(String [] args){
        account ob=new account();
        Thread1 ob1=new Thread1("One", ob, 2000);
        Thread1 ob2=new Thread1("Two",ob, 5000);
    }
}

```

```
ob1.t.start();
ob2.t.start();
try{
    Thread.sleep(2000);
}
catch(InterruptedException e){
    System.out.println("Main thread interrupted");
}
ob.disBal();
}
}
```