

//Concrete Mediator

```
public class OhareInternationalATC implements AirTrafficController {
    private boolean runwayFull = true;

    public synchronized void land(){
        while(runwayFull == true){
            try{
                wait();
            } catch (InterruptedException e){}
        }

        runwayFull = true;
        notifyAll();
    }

    public synchronized void takeoff(){
        while(runwayFull == false){
            try{
                wait();
            } catch (InterruptedException e){}
        }

        runwayFull = false;
        notifyAll();
    }
}
```

//Colleague

```
public interface Jet {  
    void operate();  
}
```

```

//Concrete Colleague

import java.util.Random;

public class Boeing787 extends Thread implements Jet{
    private OhareInternationalATC ATC;

    public Boeing787(OhareInternationalATC a){
        ATC = a;
    }

    public void run() {
        operate();
    }

    public void operate() {
        for(int i = 0; i < 5; i++){
            Random generator = new Random();
            int flightTime = generator.nextInt(400);

            ATC.takeoff();
            System.out.println("Boeing take off!");
            System.out.println("Might fly like a dream...");

            try {
                Thread.sleep(10 * flightTime);
            } catch (InterruptedException e) {}

            ATC.land();
            System.out.println("Boeing landing!");

            try {
                Thread.sleep(10 * flightTime);
            } catch (InterruptedException e) {}
        }
    }
}

```

```

//Concrete Colleague

import java.util.Random;

public class Gulfstream extends Thread implements Jet {
    private OhareInternationalATC ATC;

    public Gulfstream(OhareInternationalATC a) {
        ATC = a;
    }

    public void run() {
        operate();
    }

    public void operate() {
        for (int i = 0; i < 5; i++) {
            Random generator = new Random();
            int flightTime = generator.nextInt(400);

            ATC.takeoff();
            System.out.println("Gulfstream take off!");
            System.out.println("Flies... like a G6.");

            try {
                Thread.sleep(10 * flightTime);
            } catch (InterruptedException e) {
            }

            ATC.land();
            System.out.println("Gulfstream landing!");

            try {
                Thread.sleep(10 * flightTime);
            } catch (InterruptedException e) {
            }
        }
    }
}

```

```
//Driver

public class AirportDriver {

    public static void main(String[] args) {
        OhareInternationalATC ATC = new OhareInternationalATC();
        new Boeing787(ATC).start();
        new Gulfstream(ATC).start();
    }
}
```

Output:

Boeing take off!
Might fly like a dream...
Boeing landing!
Gulfstream take off!
Flies... like a G6.
Gulfstream landing!
Boeing take off!
Might fly like a dream...
Boeing landing!
Gulfstream take off!
Flies... like a G6.
Gulfstream landing!
Boeing take off!
Might fly like a dream...
Boeing landing!
Gulfstream take off!
Flies... like a G6.
Gulfstream landing!
Boeing take off!
Might fly like a dream...
Boeing landing!
Gulfstream take off!
Flies... like a G6.
Gulfstream landing!
Gulfstream take off!
Flies... like a G6.
Gulfstream landing!
Boeing take off!
Might fly like a dream...
Boeing landing!