

```
/*Write a Java Program to implement Strategy Pattern for Duck
Behavior. Create
instance variable that holds current state of Duck from there, we just
need to handle all
Flying Behaviors and Quack Behavior*/
```

```
//public
interface Duck {
    public void quack();
    public void fly();
}
```

```
//public
class MallardDuck implements Duck {
    public void quack() {
        System.out.println("Quack");
    }

    public void fly() {
        System.out.println("I'm flying");
    }
}
```

```
//public
interface Turkey {
    public void gobble();
    public void fly();
}
//A concrete implementation of this interface is WildTurkey:
```

```
//public
class WildTurkey implements Turkey {
    public void gobble() {
        System.out.println("Gobble gobble");
    }

    public void fly() {
        System.out.println("I'm flying a short distance");
    }
}
```

```
//The followign main program uses adapters to adapt a Turkey to a
Duck:
```

```
//public
class DuckTestDrive {
    public static void main(String[] args) {
        MallardDuck duck = new MallardDuck();

        WildTurkey turkey = new WildTurkey();
        Duck turkeyAdapter = new TurkeyAdapter(turkey);
    }
}
```

```

        System.out.println("The Turkey says...");
        turkey.gobble();
        turkey.fly();

        System.out.println("\nThe Duck says...");
        testDuck(duck);

        System.out.println("\nThe TurkeyAdapter says...");
        testDuck(turkeyAdapter);

        // Challenge
        //Drone drone = new SuperDrone();
        //Duck droneAdapter = new DroneAdapter(drone);
        //testDuck(droneAdapter);
    }

    static void testDuck(Duck duck) {
        duck.quack();
        duck.fly();
    }
}

//public
class TurkeyAdapter implements Duck {
    Turkey turkey;

    public TurkeyAdapter(Turkey turkey) {
        this.turkey = turkey;
    }

    public void quack() {
        turkey.gobble();
    }

    // To fly the same distance as a duck, a turkey needs to fly five
    times as much
    public void fly() {
        for(int i=0; i < 5; i++) {
            turkey.fly();
        }
    }
}

/*The output of the program is:

$ java DuckTestDrive
The Turkey says...
Gobble gobble
I'm flying a short distance

The Duck says...
Quack
I'm flying

The TurkeyAdapter says...
Gobble gobble

```

I'm flying a short distance
I'm flying a short distance
I'm flying a short distance
I'm flying a short distance
I'm flying a short distance

*/