

```
1 // Rudraksh Kavishwar
2 // 23070126511
3 // AIML B-3
4
5
6     public class Main {
7     public static void main(String[] args){
8         RedHeadDuck redHeadDuck=new RedHeadDuck();
9         redHeadDuck.display();
10        redHeadDuck.performFly();
11        redHeadDuck.performQuack();
12        redHeadDuck.performSwim();
13
14        RubberDuck rb = new RubberDuck();
15        rb.display();
16        rb.performFly();
17        rb.performQuack();
18        rb.performSwim();
19
20        MalardDuck md = new MalardDuck();
21        md.display();
22        md.performFly();
23        md.performQuack();
24        md.performSwim();
25    }
26 }
27
```

```
1 // Rudraksh Kavishwar
2 // AIML B-3
3 // 23070126511
4
5 abstract public class Duck {
6     FlyBehaviour flyBehaviour;
7     QuackBehaviour quackBehaviour;
8     SwimBehaviour swimBehaviour;
9
10     public void setFlyBehaviour(FlyBehaviour fb) {
11         flyBehaviour = fb;
12     }
13
14     public void setQuackBehaviour(QuackBehaviour qb) {
15         quackBehaviour = qb;
16     }
17
18     public void setSwimBehaviour(SwimBehaviour sb) {
19         swimBehaviour = sb;
20     }
21
22     abstract void display();
23     public void performFly(){
24         flyBehaviour.fly();
25     }
26     public void performQuack(){
27         quackBehaviour.quack();
28     }
```

```
1 // Rudraksh Kavishwar
2 // 23070126511
3 // AIML B-3
29     }
30     public void performSwim(){
31         swimBehaviour.swim();
32     }
33 }
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```

```
1 // Rudraksh Kavishwar

2 // 23070126511 3 // AIML B-3
4
5     public interface QuackBehaviour {
6     public void quack();
7
8
9 }
10
```

1 // Rudraksh Kavishwar

2 // 23070126511

3 // AIML B-3

4

5 public class MalardDuck extends Duck{

6 public MalardDuck(){

7 quackBehaviour=new Quack();

8 flyBehaviour=new FlyWithWings();

9 swimBehaviour= new Drown();

10

11 }

12 void display(){

13 System.out.println("This is MalardDuck Duck.....");

14

15 }

16 }

```
1 // Rudraksh Kavishwar
```

```
2 // 23070126511
```

```
3 // AIML B-3
```

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4
```

```
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```

```
6     public interface SwimBehaviour {
```

```
7     public void swim();
```

```
8     }
```

```
9
```

```
1 // Rudraksh Kavishwar
2 // 23070126511

3 // AIML B-3
4
5
6 public class RubberDuck extends Duck { 7     public
RubberDuck(){
8         flyBehaviour= new FlyNoWay();
9         quackBehaviour= new Squeak();
10        swimBehaviour= new Float();
11
12        }
13        void display(){
14        System.out.println("This is Rubber Duck....");
15        }
16        }
17
```

```
1 // Rudraksh Kavishwar
```

```
2 // 22070126128
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```
3 // AIML B-3
```

```
4
```

```
5 public interface FlyBehaviour {
```

```
6
```

```
7     public void fly();
```

```
8     }
```

```
9     10
```



```
1 // Rudraksh Kavishwar
2 // 23070126511

3 // AIML B-3
4
5
6     public class Squeak implements QuackBehaviour {
7         @Override
8         public void quack() {
9             System.out.println("Duck Only squeaks");
10        }
11    }
12
13
```

```
1 // Rudraksh Kavishwar
2 // 23070126511
```

```
3 6 AIML B-3
```

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```

```
6 public class Swim implements SwimBehaviour{
```

```
10     @Override public void
```

```
11     swim() {
```

```
12         System.out.println("This Duck can swim.");
```

```
13     }
```

```
11 }
12
```

```
1 // Rudraksh Kavishwar

2 // 3070126511
3 // AIML B-3
4
5     public class Quack implements QuackBehaviour {
6     public void quack(){
7     System.out.println("Duck Quacks");
8     }
9     }
10
```

```
1 // Rudraksh Kavishwar
2 // 23070126511
```

```
3 6 AIML B-3
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4 7
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```
6 public class FlyWithWings implements FlyBehaviour{
10     @Override public void fly()
11     {
12         System.out.println("Flying with wings"); }
```

```
11 }
12
```

```
1 // Rudraksh Kavishwar

2 // 23070126511
3 // AIML B-3
4
5     public class FlyNoWay implements FlyBehaviour{
6     public void fly(){
7     System.out.println("Cannot Fly....");
8     }
9     }
10
```

```
1 // Rudraksh Kavishwar
2 // 23070126511
```

```
3 6 / AIML B-3
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```
6 9 public class Drown implements SwimBehaviour{
```

```
10     @Override public void
```

```
11     swim() {
```

```
12         System.out.println("This Duck cannot swim");
```

```
13     }
```

```
11 }
12
```

```
1 // Rudraksh Kavishwar

2 // 23070126511
3 // AIML B-3
4
5     public class Float implements SwimBehaviour{
6         @Override
7         public void swim() {
8             System.out.println("This duck can float.");
9         }
10    }
11
```



C:\Windows\System32\cmd.e X



Microsoft Windows [Version 10.0.22621.3155]
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D:\JAVA\PROGRAMS\Duck>javac Main.java

D:\JAVA\PROGRAMS\Duck>java Main

This is RedHead Duck.....

Flying with wings

Duck Quacks

This Duck can swim.

This is Rubber Duck....

Cannot Fly....

Duck Only squeaks

This duck can float.

This is MalardDuck Duck.....

Flying with wings

Duck Quacks

This Duck cannot swim

D:\JAVA\PROGRAMS\Duck>|