

```
1 public class Monster {
2     protected String name;
3
4     public Monster(String name){
5         this.name = name;
6     }
7
8     public String attack(){
9 //         return "Attack with ";
10         return "I don't know how to attack!";
11     }
12
13 }
14
```

```
1 public class FireMonster extends Monster{
2     public FireMonster(String name){
3         super(name);
4     }
5
6     @Override
7     public String attack() {
8         return "Attack with fire!";
9     }
10 }
11
```

```
1 public class TestMonster {
2     public static void main(String[] args){
3         // Declare instances of the superclass,
4         // substituted by subclasses.
5         Monster m1 = new FireMonster("r2u2"); //
6         // upcast
7         Monster m2 = new WaterMonster("u2r2"); //
8         // upcast
9         Monster m3 = new StoneMonster("r2r2"); //
10        // upcast
11        // Invoke the actual implementation
12        System.out.println(m1.attack()); // Run
13        // FireMonster's attack()
14        System.out.println(m2.attack()); // Run
15        // WaterMonster's attack()
16        System.out.println(m3.attack()); // Run
17        // StoneMonster's attack()
18
19        // m1 dies, generates a new instance and re-
20        // assign to m1.
21        m1 = new StoneMonster("a2b2"); // upcast
22        System.out.println(m1.attack()); // Run
23        // StoneMonster's attack()
24
25        // We have a problem here!!!
26        Monster m4 = new Monster("u2u2");
27        System.out.println(m4.attack());
28    }
29 }
```

```
1 public class StoneMonster extends Monster{
2     public StoneMonster(String name){
3         super(name);
4     }
5
6     @Override
7     public String attack() {
8         return "Attack with stones!";    }
9 }
10
```

```
1 public class WaterMonster extends Monster{
2     public WaterMonster(String name){
3         super(name);
4     }
5
6     @Override
7     public String attack() {
8         return "Attack with water!";
9     }
10 }
11
```