

```

1 package club.westcs.biome;
2
3 public class Predator extends Animal{
4
5     //Attributes
6     public static int predatorPopulation = 0;
7
8     //Constructor
9     public Predator() {
10         super(); // calls the constructor of the parent class
11         predatorPopulation++;
12     }
13
14     @Override
15     public Animal baby(Animal other) {
16         if(other instanceof Predator) { // Object instanceof Object checks if the two are exactly the same class type
17             if(this.gender != other.isGender()) {
18                 if(rand.nextInt(4) == 1) { // birth rate
19                     return new Predator();
20                 }
21             }
22         }
23         return null;
24     }
25
26     public void predate(Animal other) {
27         if(other instanceof Prey && rand.nextBoolean()) { // predator hunting efficiency
28             setHunger(other.getHunger());
29             other.setAlive();
30             Prey.preyPopulation--;
31         }
32     }
33
34     @Override
35     public Animal life(Animal other, int food) {
36         predate(other);
37         setLifeSpan();
38         stillAlive();
39
40         if(this.alive == false) {
41             predatorPopulation--;
42             return null;
43         }
44         return baby(other);
45     }
46
47
48
49
50 }
51

```