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1  from agents import *
2  from random import randint
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4
5  model = Model("Predator-prey-model", 50, 50)
6
7
8  class Prey(Agent):
9      def setup(self, model):
10         self.food = 0
11         self.time_since_eating = 0
12         self.color = (100,100,250)
13         pass
14
15
16     def step(self, model):
17         self.direction += randint(-10,10)
18         self.forward()
19         tile = self.current_tile()
20         #if tile.info["grass"]:
21         #    self.food += 1
22         #    self.time_since_eating = 0
23         #    tile.info["grass"] = True
24         #if self.food > 10:
25         #    new_prey = Prey()
26         #    new_prey.x = self.x
27         #    new_prey.y = self.y
28         #    model.add_agent(new_prey)
29         #    self.food = 0
30         #self.time_since_eating += 1
31         #if self.time_since_eating > 60:
32         #    self.destroy()
33         pass
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def model_setup(model):  
    model.reset()  
    for a in range(100):  
        model.add_agent(Prey())  
    model.reproduce_food_count = 10  
    model.max_time_since_eating = 60  
  
def model_step(model):  
    for a in model.agents:  
        a.step(model)  
    for t in model.tiles:  
        t.info["grass"] = True  
        t.color = (0, 150, 0)  
    for t in model.tiles:  
        if t.info["grass"]:  
            t.color = (0, 150, 0)  
        else:  
            t.color = (80,80, 0)  
            if randint(1, 500) == 500:  
                t.info["grass"] = True  
            if t.info["grass"]:  
                self.food += 1  
                self.time_since_eating = 0  
                tile.info["grass"] = True  
            if self.food > 10:  
                new_prey = Prey()  
                new_prey.x = self.x  
                new_prey.y = self.y  
                model.add_agent(new_prey)  
            self.food = 0  
            self.time_since_eating += 1  
            if self.time since eating > 60:
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68         :         :         if self.time_since_eating > 60:
69         :         :         :         self.destroy()
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73 model.add_button("Goo", model_step, toggle=True)
74
75 model.add_button("Setup", model_setup)
76
77
78
79
80 run(model)
81
```