from turtle import \*  
from random import randrange  
from freegames import square, vector  
  
food = vector(0, 0)  
snake = [vector(10, 0)]  
aim = vector(0, -10)  
  
def change(x, y):  
 *"Change snake direction."* aim.x = x  
 aim.y = y  
  
def inside(head):  
 *"Return True if head inside boundaries."* return -200 < head.x < 190 and -200 < head.y < 190  
  
def move():  
 *"Move snake forward one segment."* head = snake[-1].copy()  
 head.move(aim)  
  
 if not inside(head) or head in snake:  
 square(head.x, head.y, 20, 'red')  
 update()  
 return  
  
 snake.append(head)  
  
 if head == food:  
 print('Snake:', len(snake))  
 food.x = randrange(-15, 15) \* 10  
 food.y = randrange(-15, 15) \* 10  
 else:  
 snake.pop(0)  
  
 clear()  
  
 for body in snake:  
 square(body.x, body.y, 9, 'black')  
  
 square(food.x, food.y, 9, 'red')  
 update()  
 ontimer(move, 50)  
  
setup(420, 420, 370, 0)  
hideturtle()  
tracer(False)  
listen()  
onkey(lambda: change(10, 0), 'Right')  
onkey(lambda: change(-10, 0), 'Left')  
onkey(lambda: change(0, 10), 'Up')  
onkey(lambda: change(0, -10), 'Down')  
move()  
done()