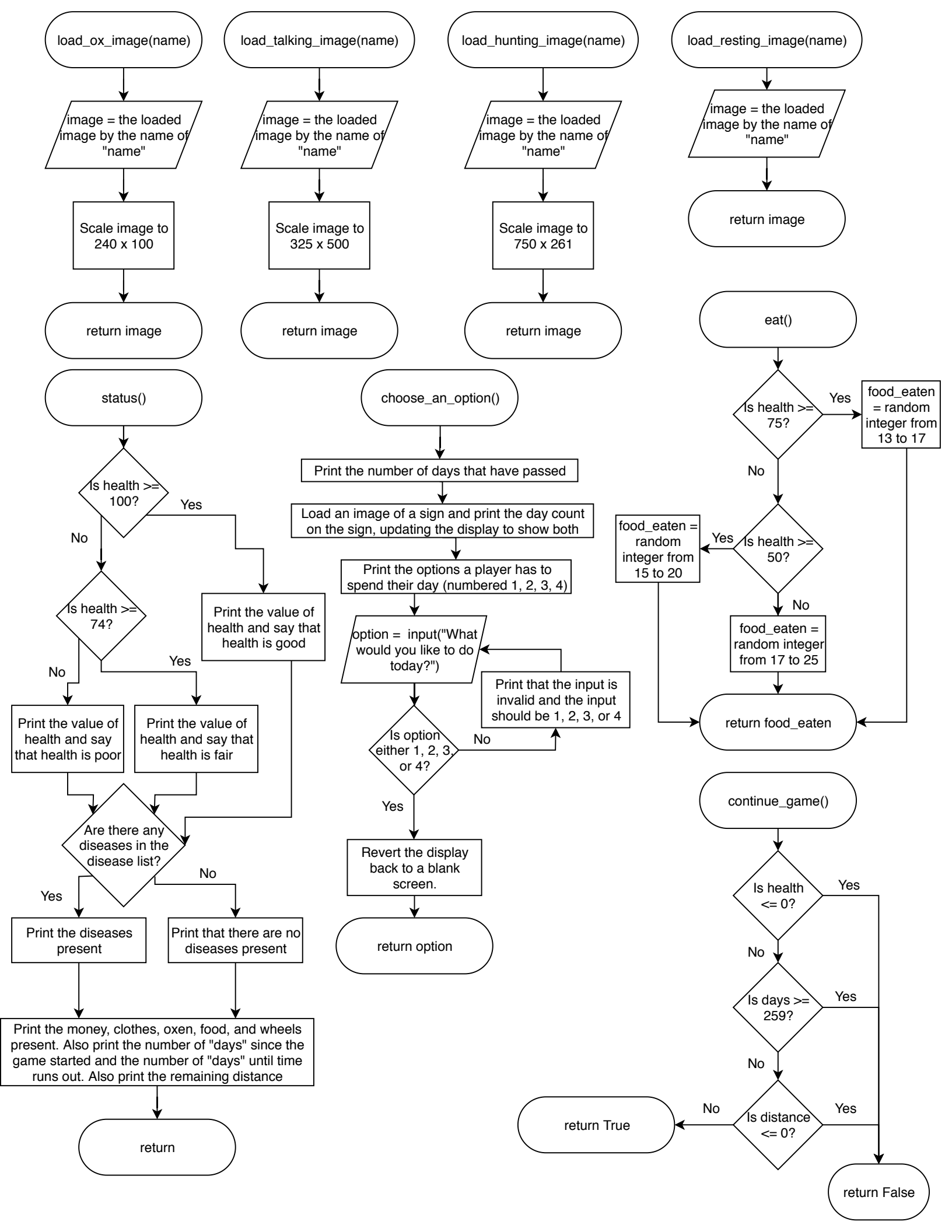
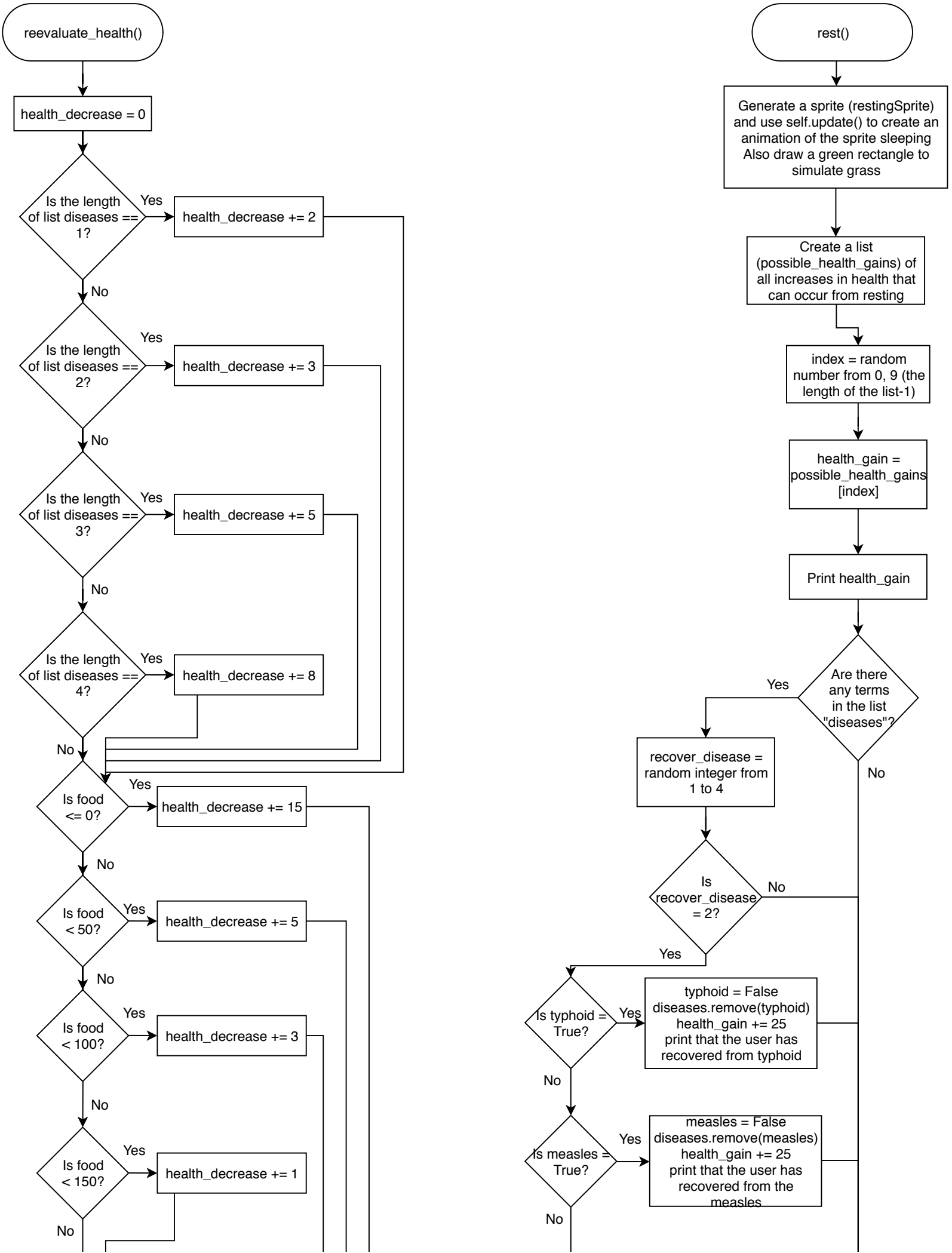
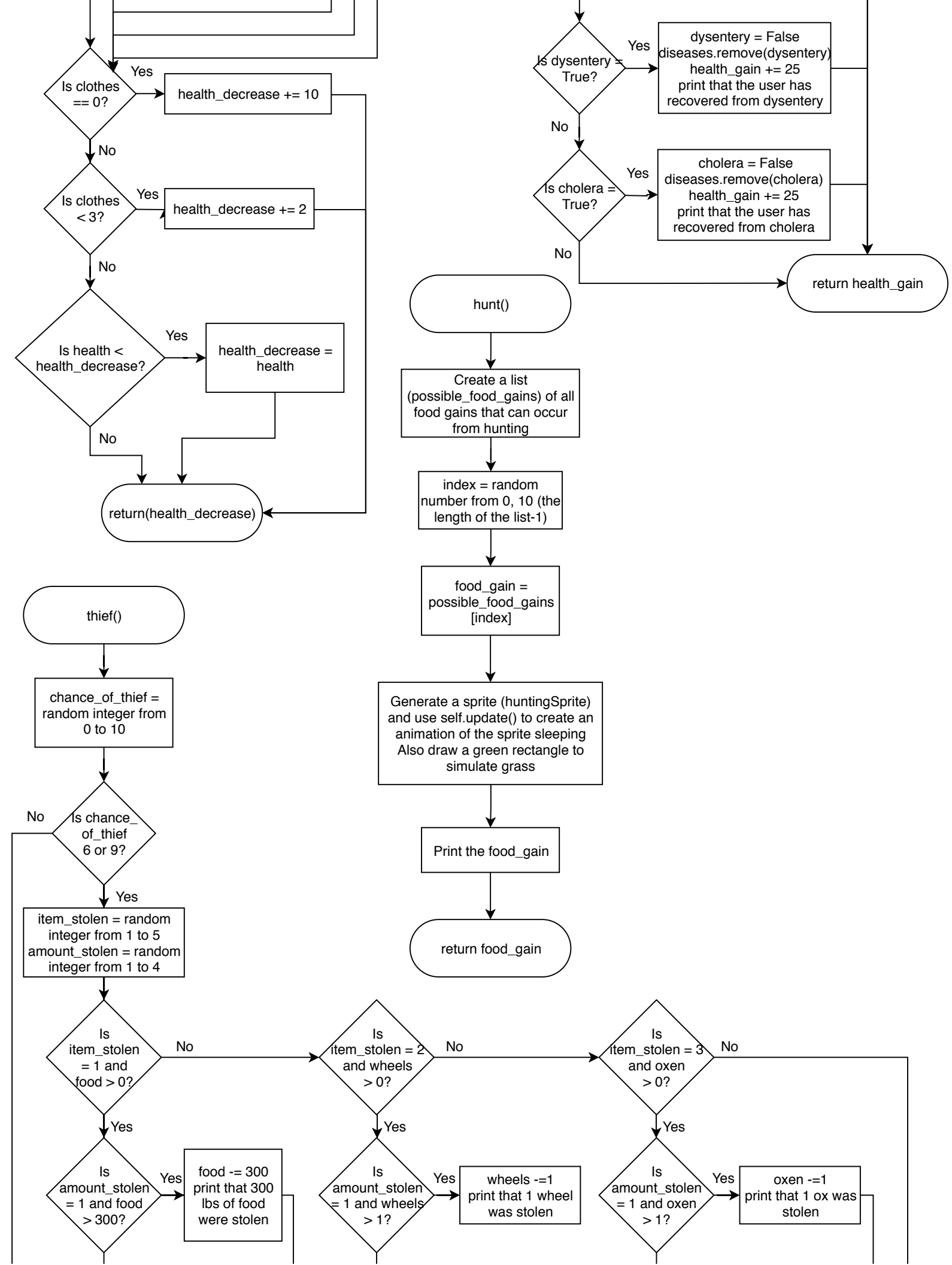
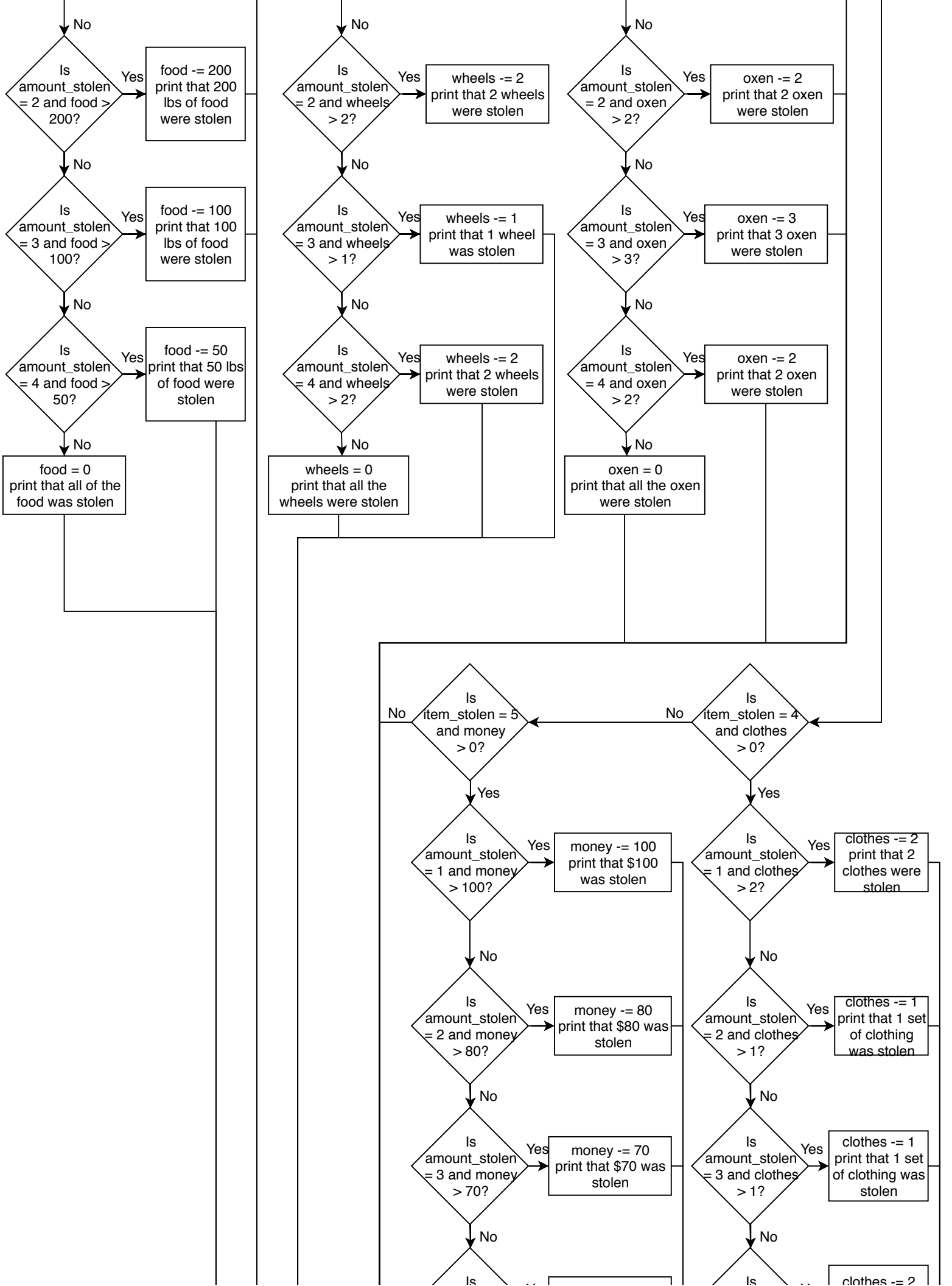
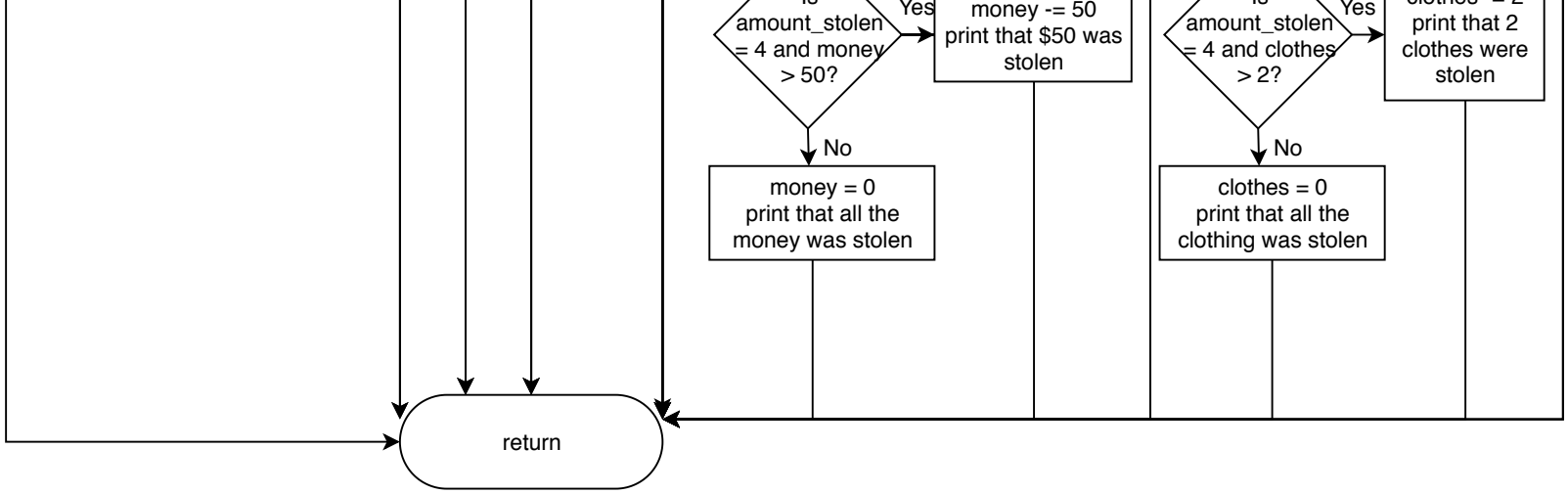
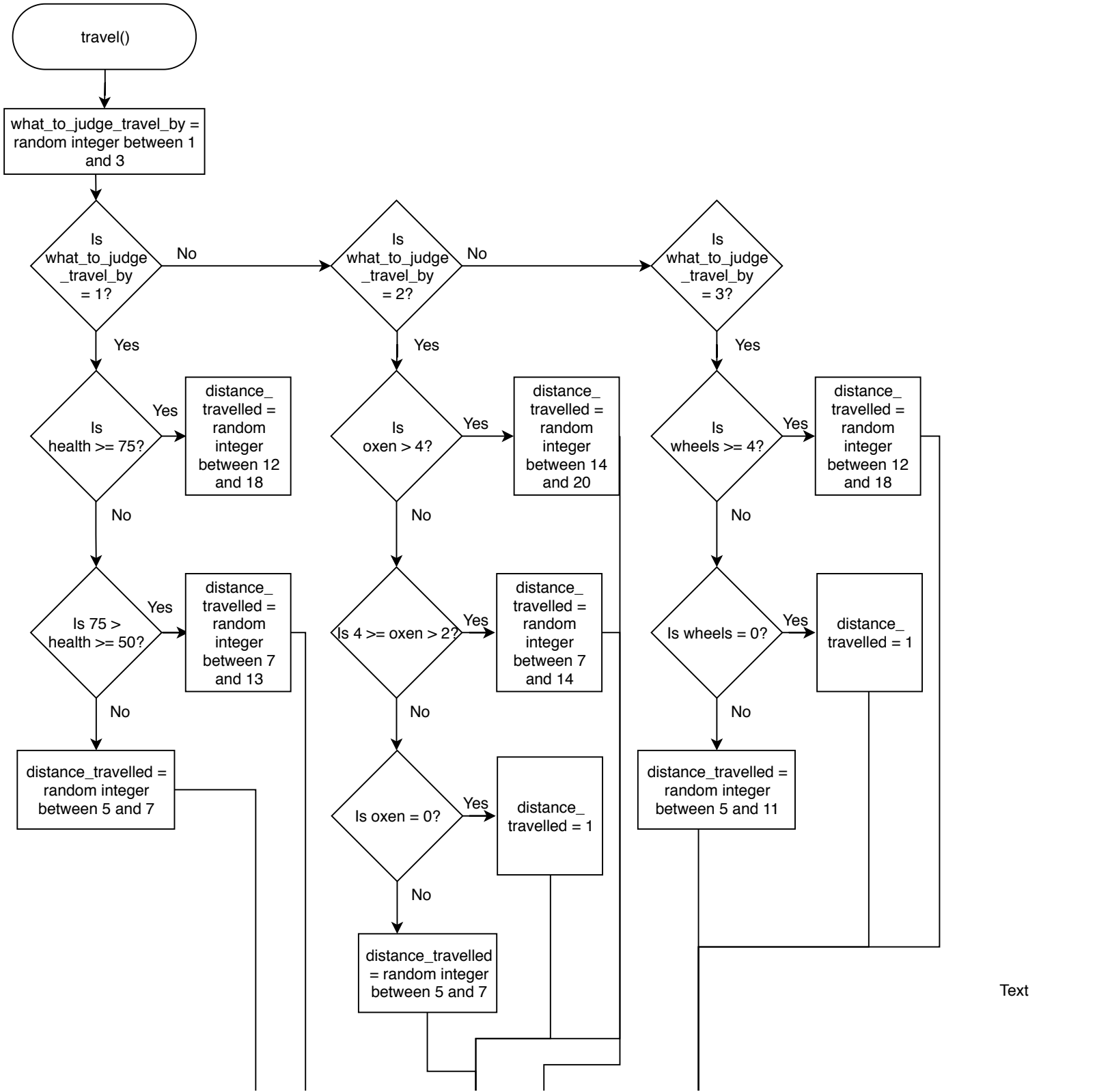

load_ox_image(name)
image = the loaded image by the name of "name"
Scale image to 240 x 100
return image
load_talking_image(name)
image = the loaded image by the name of "name"
Scale image to 325 x 500
return image
load_hunting_image(name)
image = the loaded image by the name of "name"
Scale image to 750 x 261
return image
load_resting_image(name)
image = the loaded image by the name of "name"
return image
status()
Is health >= 100?
Yes
No
Is health >= 74?
Yes
No
Print the value of health and say that health is good
Print the value of health and say that health is poor
Print the value of health and say that health is fair
Are there any diseases in the disease list?
Yes
No
Print the diseases present
Print that there are no diseases present
Print the money, clothes, oxen, food, and wheels present. Also print the number of "days" since the game started and the number of "days" until time runs out. Also print the remaining distance
return
choose_an_option()
Print the number of days that have passed
Load an image of a sign and print the day count on the sign, updating the display to show both
Print the options a player has to spend their day (numbered 1, 2, 3, 4)
option = input("What would you like to do today?")
Print that the input is invalid and the input should be 1, 2, 3, or 4
Is option either 1, 2, 3, or 4?
No
Yes
Revert the display back to a blank screen.
return option
eat()
Is health >= 75?
Yes
food_eaten = random integer from 13 to 17
No
Is health >= 50?
Yes
food_eaten = random integer from 15 to 20
No
food_eaten = random integer from 17 to 25
return food_eaten
continue_game()
Is health <= 0?
Yes
No
Is days >= 259?
Yes
No
Is distance <= 0?
Yes
No
return True
return False


reevaluate_health()
health_decrease = 0
Is the length of list diseases == 1?
Yes
health_decrease += 2
No
Is the length of list diseases == 2?
Yes
health_decrease += 3
No
Is the length of list diseases == 3?
Yes
health_decrease += 5
No
Is the length of list diseases == 4?
Yes
health_decrease += 8
No
Is food <= 0?
Yes
health_decrease += 15
No
Is food < 50?
Yes
health_decrease += 5
No
Is food < 100?
Yes
health_decrease += 3
No
Is food < 150?
Yes
health_decrease += 1
No
rest()
Generate a sprite (restingSprite) and use self.update() to create an animation of the sprite sleeping Also draw a green rectangle to simulate grass
Create a list (possible_health_gains) of all increases in health that can occur from resting
index = random number from 0, 9 (the length of the list-1)
health_gain = possible_health_gains [index]
Print health_gain
Are there any terms in the list "diseases"?
Yes
No
recover_disease = random integer from 1 to 4
Is recover_disease = 2?
No
Yes
Is typhoid = True?
Yes
typhoid = False
diseases.remove(typhoid)
health_gain += 25
print that the user has recovered from typhoid
No
Is measles = True?
Yes
measles = False
diseases.remove(measles)
health_gain += 25
print that the user has recovered from the measles
No

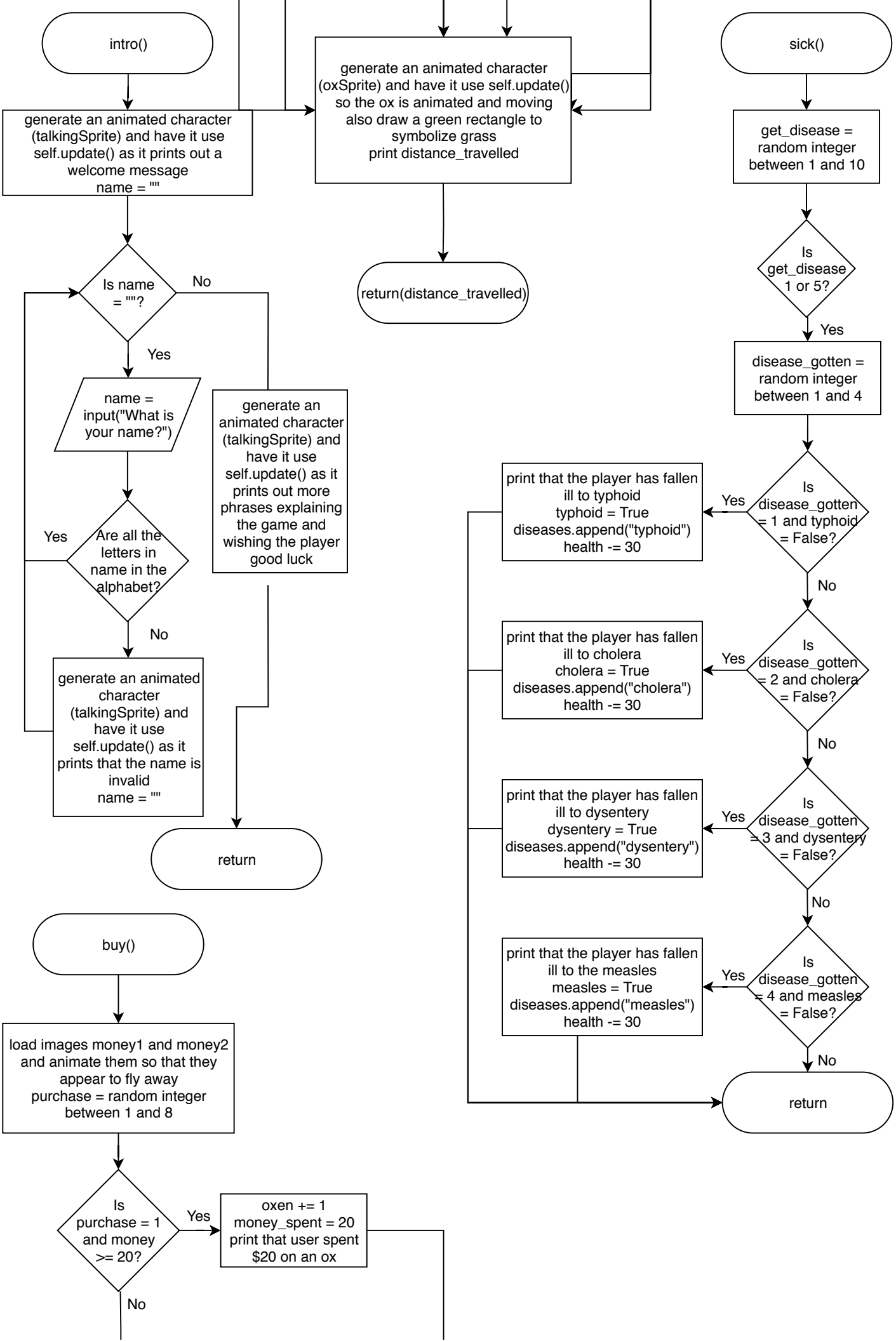

Is clothes == 0?
Yes
health_decrease += 10
No
Is clothes < 3?
Yes
health_decrease += 2
No
Is health < health_decrease?
Yes
health_decrease = health
No
return(health_decrease)
Is dysentery = True?
Yes
dysentery = False
diseases.remove(dysentery)
health_gain += 25
print that the user has recovered from dysentery
No
Is cholera = True?
Yes
cholera = False
diseases.remove(cholera)
health_gain += 25
print that the user has recovered from cholera
No
return health_gain
hunt()
Create a list (possible_food_gains) of all food gains that can occur from hunting
index = random number from 0, 10 (the length of the list-1)
food_gain = possible_food_gains [index]
Generate a sprite (huntingSprite) and use self.update() to create an animation of the sprite sleeping
Also draw a green rectangle to simulate grass
Print the food_gain
return food_gain
thief()
chance_of_thief = random integer from 0 to 10
Is chance_ of_thief 6 or 9?
No
Yes
item_stolen = random integer from 1 to 5
amount_stolen = random integer from 1 to 4
Is item_stolen = 1 and food > 0?
No
Yes
Is amount_stolen = 1 and food > 300?
Yes
food -= 300
print that 300 lbs of food were stolen
Is item_stolen = 2 and wheels > 0?
No
Yes
Is amount_stolen = 1 and wheels > 1?
Yes
wheels -=1
print that 1 wheel was stolen
Is item_stolen = 3 and oxen > 0?
No
Yes
Is amount_stolen = 1 and oxen > 1?
Yes
oxen -=1
print that 1 ox was stolen

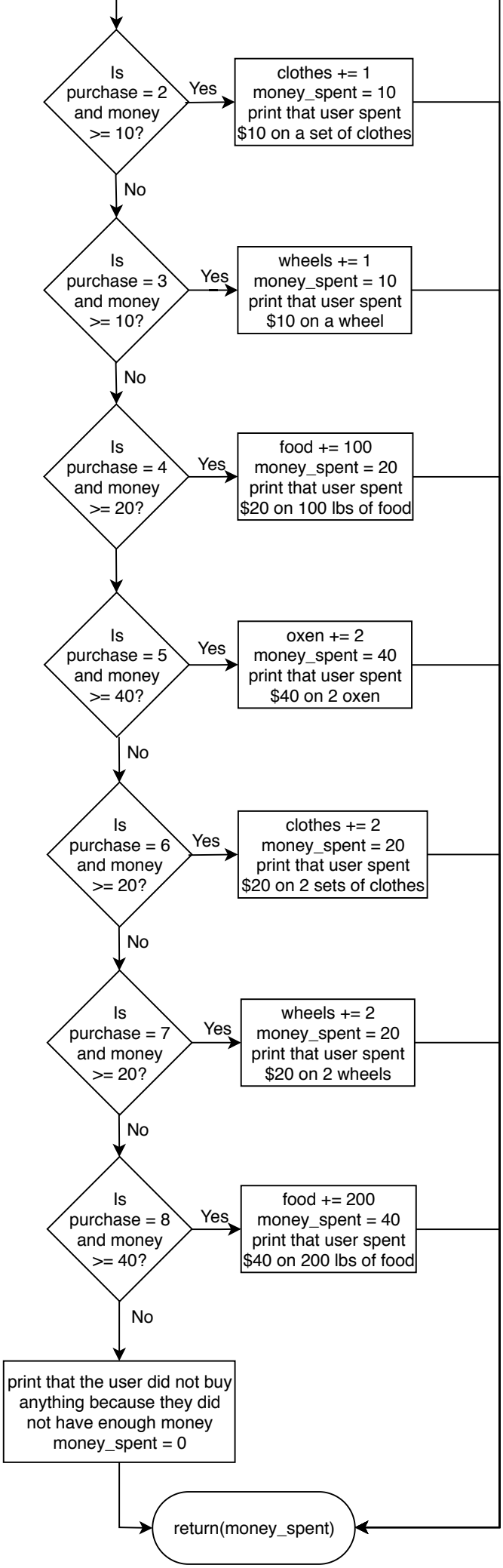

No
Is amount_stolen = 2 and food > 200?
Yes
food -= 200
print that 200 lbs of food were stolen
No
Is amount_stolen = 3 and food > 100?
Yes
food -= 100
print that 100 lbs of food were stolen
No
Is amount_stolen = 4 and food > 50?
Yes
food -= 50
print that 50 lbs of food were stolen
No
food = 0
print that all of the food was stolen
No
Is amount_stolen = 2 and wheels > 2?
Yes
wheels -= 2
print that 2 wheels were stolen
No
Is amount_stolen = 3 and wheels > 1?
Yes
wheels -= 1
print that 1 wheel was stolen
No
Is amount_stolen = 4 and wheels > 2?
Yes
wheels -= 2
print that 2 wheels were stolen
No
wheels = 0
print that all the wheels were stolen
No
Is amount_stolen = 2 and oxen > 2?
Yes
oxen -= 2
print that 2 oxen were stolen
No
Is amount_stolen = 3 and oxen > 3?
Yes
oxen -= 3
print that 3 oxen were stolen
No
Is amount_stolen = 4 and oxen > 2?
Yes
oxen -= 2
print that 2 oxen were stolen
No
oxen = 0
print that all the oxen were stolen
No
Is item_stolen = 5 and money > 0?
Yes
Is amount_stolen = 1 and money > 100?
Yes
money -= 100
print that $100 was stolen
No
Is amount_stolen = 2 and money > 80?
Yes
money -= 80
print that $80 was stolen
No
Is amount_stolen = 3 and money > 70?
Yes
money -= 70
print that $70 was stolen
No
No
Is item_stolen = 4 and clothes > 0?
Yes
Is amount_stolen = 1 and clothes > 2?
Yes
clothes -= 2
print that 2 clothes were stolen
No
Is amount_stolen = 2 and clothes > 1?
Yes
clothes -= 1
print that 1 set of clothing was stolen
No
Is amount_stolen = 3 and clothes > 1?
Yes
clothes -= 1
print that 1 set of clothing was stolen
No

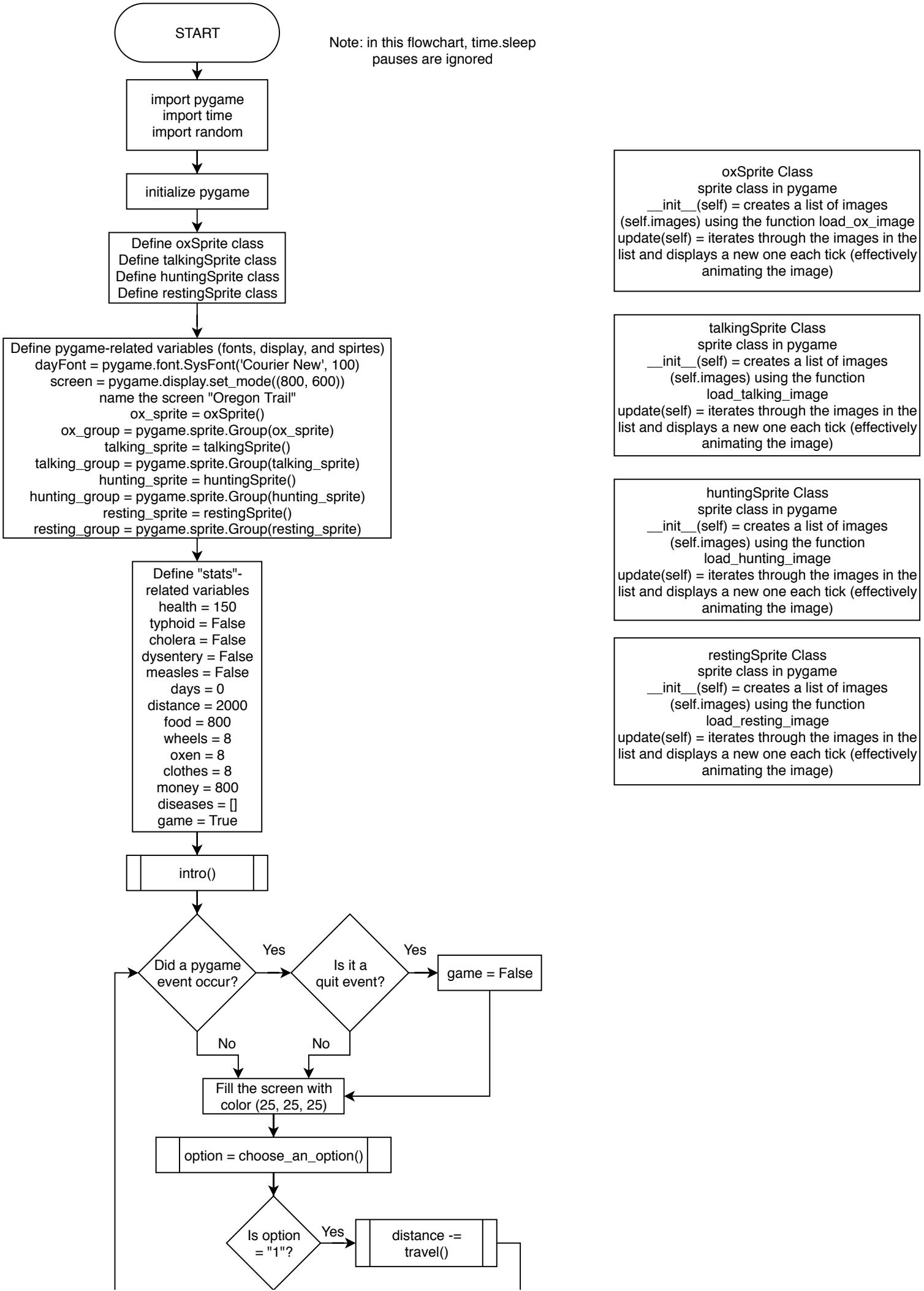

amount_stolen = 4 and money > 50?
Yes
money -= 50
print that $50 was stolen
No
money = 0
print that all the money was stolen
amount_stolen = 4 and clothes > 2?
Yes
print that 2 clothes were stolen
No
clothes = 0
print that all the clothing was stolen
return

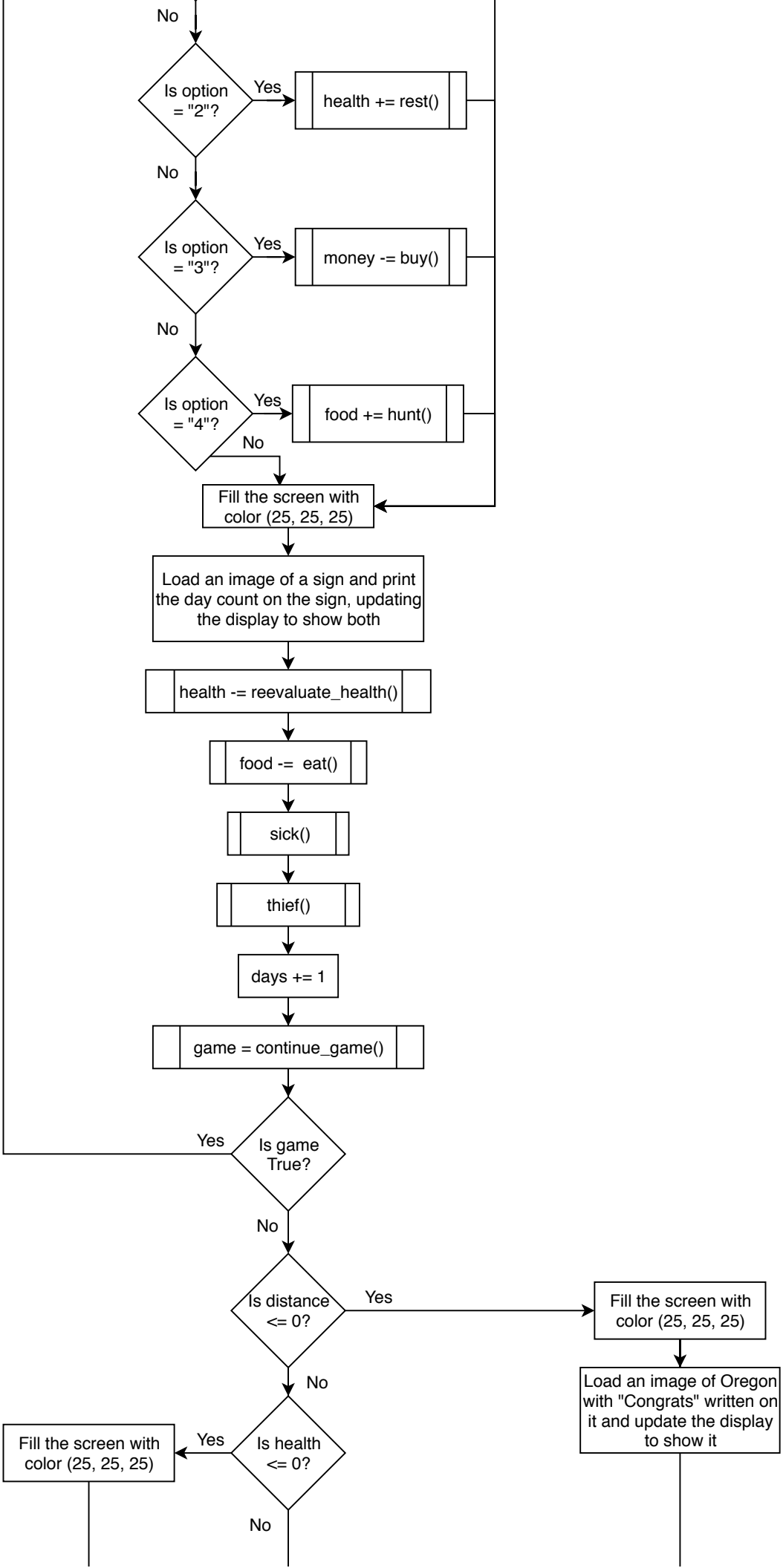

travel()
what_to_judge_travel_by = random integer between 1 and 3
Is what_to_judge_travel_by = 1?
No
Is what_to_judge_travel_by = 2?
No
Is what_to_judge_travel_by = 3?
Yes
Is health >= 75?
Yes
distance_travelled = random integer between 12 and 18
No
Is 75 > health >= 50?
Yes
distance_travelled = random integer between 7 and 13
No
distance_travelled = random integer between 5 and 7
Is oxen > 4?
Yes
distance_travelled = random integer between 14 and 20
No
Is 4 >= oxen > 2?
Yes
distance_travelled = random integer between 7 and 14
No
Is oxen = 0?
Yes
distance_travelled = 1
No
distance_travelled = random integer between 5 and 7
Is wheels >= 4?
Yes
distance_travelled = random integer between 12 and 18
No
Is wheels = 0?
Yes
distance_travelled = 1
No
distance_travelled = random integer between 5 and 11

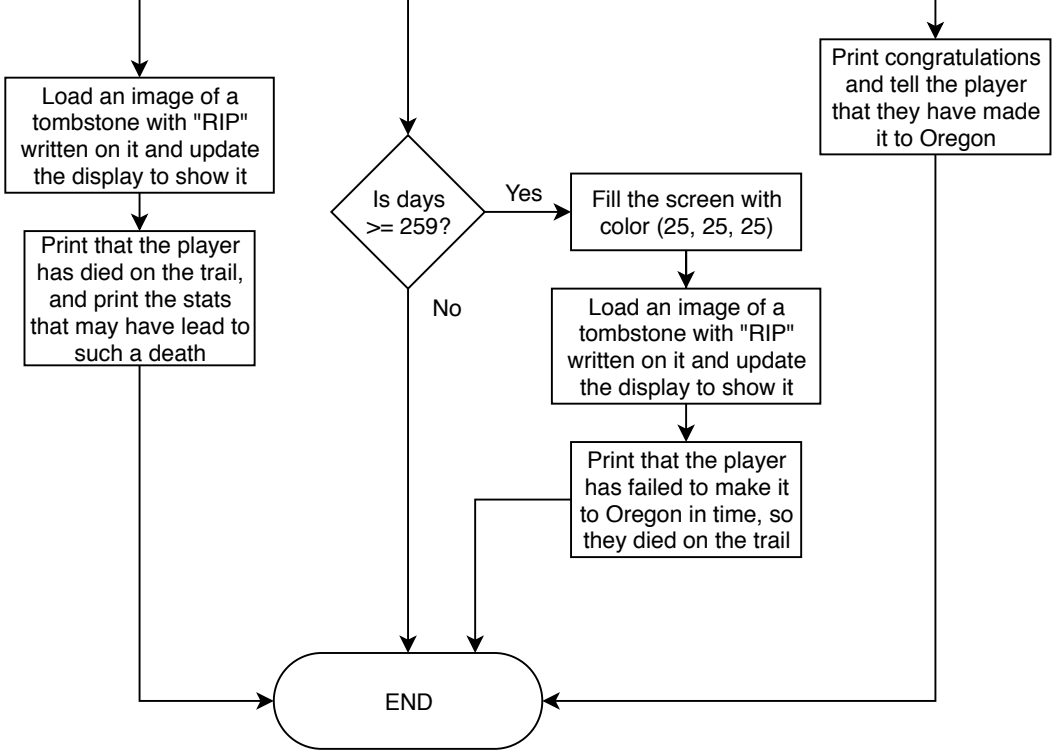
Text


intro()
generate an animated character (talkingSprite) and have it use self.update() as it prints out a welcome message
name = ""
Is name = ""?
No
Yes
name = input("What is your name?")
Are all the letters in name in the alphabet?
Yes
No
generate an animated character (talkingSprite) and have it use self.update() as it prints that the name is invalid
name = ""
generate an animated character (talkingSprite) and have it use self.update() as it prints out more phrases explaining the game and wishing the player good luck
return
generate an animated character (oxSprite) and have it use self.update() so the ox is animated and moving
also draw a green rectangle to symbolize grass
print distance_travelled
return(distance_travelled)
sick()
get_disease = random integer between 1 and 10
Is get_disease 1 or 5?
Yes
disease_gotten = random integer between 1 and 4
Is disease_gotten = 1 and typhoid = False?
Yes
print that the player has fallen ill to typhoid
typhoid = True
diseases.append("typhoid")
health -= 30
No
Is disease_gotten = 2 and cholera = False?
Yes
print that the player has fallen ill to cholera
cholera = True
diseases.append("cholera")
health -= 30
No
Is disease_gotten = 3 and dysentery = False?
Yes
print that the player has fallen ill to dysentery
dysentery = True
diseases.append("dysentery")
health -= 30
No
Is disease_gotten = 4 and measles = False?
Yes
print that the player has fallen ill to the measles
measles = True
diseases.append("measles")
health -= 30
No
return
buy()
load images money1 and money2 and animate them so that they appear to fly away
purchase = random integer between 1 and 8
Is purchase = 1 and money >= 20?
Yes
oxen += 1
money_spent = 20
print that user spent $20 on an ox
No


Is purchase = 2 and money >= 10?
Yes
clothes += 1
money_spent = 10
print that user spent $10 on a set of clothes
No
Is purchase = 3 and money >= 10?
Yes
wheels += 1
money_spent = 10
print that user spent $10 on a wheel
No
Is purchase = 4 and money >= 20?
Yes
food += 100
money_spent = 20
print that user spent $20 on 100 lbs of food
Is purchase = 5 and money >= 40?
Yes
oxen += 2
money_spent = 40
print that user spent $40 on 2 oxen
No
Is purchase = 6 and money >= 20?
Yes
clothes += 2
money_spent = 20
print that user spent $20 on 2 sets of clothes
No
Is purchase = 7 and money >= 20?
Yes
wheels += 2
money_spent = 20
print that user spent $20 on 2 wheels
No
Is purchase = 8 and money >= 40?
Yes
food += 200
money_spent = 40
print that user spent $40 on 200 lbs of food
No
print that the user did not buy anything because they did not have enough money
money_spent = 0
return(money_spent)


START
Note: in this flowchart, time.sleep pauses are ignored
import pygame
import time
import random
initialize pygame
Define oxSprite class
Define talkingSprite class
Define huntingSprite class
Define restingSprite class
Define pygame-related variables (fonts, display, and spirtes)
dayFont = pygame.font.SysFont('Courier New', 100)
screen = pygame.display.set_mode((800, 600))
name the screen "Oregon Trail"
ox_sprite = oxSprite()
ox_group = pygame.sprite.Group(ox_sprite)
talking_sprite = talkingSprite()
talking_group = pygame.sprite.Group(talking_sprite)
hunting_sprite = huntingSprite()
hunting_group = pygame.sprite.Group(hunting_sprite)
resting_sprite = restingSprite()
resting_group = pygame.sprite.Group(resting_sprite)
Define "stats"-related variables
health = 150
typhoid = False
cholera = False
dysentery = False
measles = False
days = 0
distance = 2000
food = 800
wheels = 8
oxen = 8
clothes = 8
money = 800
diseases = []
game = True
intro()
Did a pygame event occur?
Yes
Is it a quit event?
Yes
game = False
No
No
Fill the screen with color (25, 25, 25)
option = choose_an_option()
Is option = "1"?
Yes
distance -= travel()
oxSprite Class
sprite class in pygame
__init__(self) = creates a list of images (self.images) using the function load_ox_image
update(self) = iterates through the images in the list and displays a new one each tick (effectively animating the image)
talkingSprite Class
sprite class in pygame
__init__(self) = creates a list of images (self.images) using the function load_talking_image
update(self) = iterates through the images in the list and displays a new one each tick (effectively animating the image)
huntingSprite Class
sprite class in pygame
__init__(self) = creates a list of images (self.images) using the function load_hunting_image
update(self) = iterates through the images in the list and displays a new one each tick (effectively animating the image)
restingSprite Class
sprite class in pygame
__init__(self) = creates a list of images (self.images) using the function load_resting_image
update(self) = iterates through the images in the list and displays a new one each tick (effectively animating the image)


No
Is option = "2"?
Yes
health += rest()
No
Is option = "3"?
Yes
money -= buy()
No
Is option = "4"?
Yes
food += hunt()
No
Fill the screen with color (25, 25, 25)
Load an image of a sign and print the day count on the sign, updating the display to show both
health -= reevaluate_health()
food -= eat()
sick()
thief()
days += 1
game = continue_game()
Yes
Is game True?
No
Is distance <= 0?
Yes
Fill the screen with color (25, 25, 25)
Load an image of Oregon with "Congrats" written on it and update the display to show it
No
Is health <= 0?
Yes
Fill the screen with color (25, 25, 25)
No


Load an image of a tombstone with "RIP" written on it and update the display to show it
Print that the player has died on the trail, and print the stats that may have lead to such a death
Is days >= 259?
Yes
No
Fill the screen with color (25, 25, 25)
Load an image of a tombstone with "RIP" written on it and update the display to show it
Print that the player has failed to make it to Oregon in time, so they died on the trail
Print congratulations and tell the player that they have made it to Oregon
END