import pygame

class **PlayerInput**:

def **\_\_init\_\_**(self):

self.stop = False

self.left = False

self.right = False

def **update**(self):

events = pygame.event.get()

for e in events:

if e.type == pygame.QUIT:

self.stop = True

elif e.type == pygame.KEYDOWN:

if e.key == pygame.K\_LEFT:

self.left = True

if e.key == pygame.K\_RIGHT:

self.right = True

elif e.type == pygame.KEYUP:

if e.key == pygame.K\_LEFT:

self.left = False

if e.key == pygame.K\_RIGHT:

self.right = False

class **Player**:

def **\_\_init\_\_**(self):

self.playerImage = pygame.image.load("player.png").convert\_alpha()

self.rect = self.playerImage.get\_rect(bottomleft=(0, window.get\_height()))

self.alive = True

def **move**(self, player\_input):

if player\_input.left and self.rect.left > window.get\_rect().left:

self.rect.x = self.rect.x - 2

if player\_input.right and self.rect.right < window.get\_rect().right:

self.rect.x = self.rect.x + 2

class **Alien**:

def **\_\_init\_\_**(self, speed\_x):

self.alienImage = pygame.image.load("alien.png").convert\_alpha()

self.rect = self.alienImage.get\_rect(topright=(0,0))

self.x = self.rect.x

self.speed\_x = speed\_x

self.bounds = window.get\_rect()

self.direction = 1

def **move**(self):

self.x = self.x + self.direction \* self.speed\_x

self.rect.x = self.x

if self.rect.right > self.bounds.right:

self.direction = -1

if self.rect.left < self.bounds.left:

self.direction = 1

class **GameState**:

def **\_\_init\_\_**(self):

self.player = Player()

self.alien = Alien(1.0)

def **update**(self, player\_input):

self.player.move(player\_input)

self.alien.move()

def **paint\_screen**(window):

window.fill((0,0,0))

window.blit(gameState.player.playerImage, gameState.player.rect)

window.blit(gameState.alien.alienImage, gameState.alien.rect)

pygame.display.flip()

def **main\_loop**():

while not player\_input.stop:

pygame.time.delay(20)

player\_input.update()

gameState.update(player\_input)

paint\_screen(window)

pygame.display.quit()

pygame.quit()

pygame.init()

screen\_width = 800

screen\_height = 600

window = pygame.display.set\_mode((screen\_width,screen\_height))

player\_input = PlayerInput()

gameState = GameState()

main\_loop()