import pygame

import sys

import random

# 初期化

pygame.init()

# 画面の設定

screen\_width, screen\_height = 600, 400

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

pygame.display.set\_caption("100戦錬磨")

player\_image = pygame.image.load("data/img/chara.png")

enemy\_image = pygame.image.load("data/img/enemy.png")

background\_image = pygame.image.load("data/img/back.png")

# 色の定義

white = (255, 255, 255)

black = (0, 0, 0)

red = (255, 0, 0)

# プレイヤーの設定

player\_rect = player\_image.get\_rect()

player\_rect.center = (screen\_width // 2, screen\_height - player\_rect.height - 10)

player\_speed = 35

# 弾の設定

bullet\_size = 10

bullet\_speed = 7

bullets = []

# 敵の設定

enemy\_size = 50

enemy\_speed = 3

enemies = []

# スコア

score = 0

font = pygame.font.Font(None, 36)

def draw\_bullet(x, y):

    pygame.draw.rect(screen, white, [x, y, bullet\_size, bullet\_size])

def show\_score(score):

    score\_text = font.render("Score: " + str(score), True, white)

    screen.blit(score\_text, [10, 10])

# ゲームループ

clock = pygame.time.Clock()

accelerate\_once = True

game\_clear = False

while not game\_clear:

    for event in pygame.event.get():

        if event.type == pygame.QUIT:

            pygame.quit()

            sys.exit()

        # キー入力

        if event.type == pygame.KEYDOWN:

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

                player\_rect.x -= player\_speed

            elif event.key == pygame.K\_RIGHT:

                player\_rect.x += player\_speed

            elif event.key == pygame.K\_SPACE:

                bullets.append([player\_rect.x + player\_rect.width // 2 - bullet\_size // 2, player\_rect.y])

    # プレイヤーの移動範囲を制限

    player\_x = max(0, min(player\_rect.x, screen\_width - player\_rect.width))

    # 弾の移動

    for bullet in bullets:

        bullet[1] -= bullet\_speed

    # 敵の生成と移動

    if random.randint(1, 50) == 1:

        enemy\_x = random.randint(0, screen\_width - enemy\_size)

        enemy\_y = -enemy\_size

        enemies.append([enemy\_x, enemy\_y])

    for enemy in enemies:

        enemy[1] += enemy\_speed

    # 衝突判定

    for bullet in bullets:

        for enemy in enemies:

            if (

                enemy[0] < bullet[0] < enemy[0] + enemy\_size

                and enemy[1] < bullet[1] < enemy[1] + enemy\_size

            ):

                bullets.remove(bullet)

                enemies.remove(enemy)

                score += 1

    if score == 100:

      game\_clear = True

    if score > 0 and score % 10 == 0 and accelerate\_once :

      enemy\_speed += 0.6

      accelerate\_once = False

    if score % 10 != 0:

      accelerate\_once = True

    # 画面のクリア

    screen.fill(black)

    # 描画

    screen.blit(player\_image, player\_rect)

    for bullet in bullets:

         draw\_bullet(bullet[0], bullet[1])

    for enemy in enemies:

         screen.blit(enemy\_image, (enemy[0], enemy[1]))

    show\_score(score)

    # 画面更新

    pygame.display.flip()

    # フレーム制御

    clock.tick(60)

font\_game\_clear = pygame.font.Font(None, 72)

text\_game\_clear = font\_game\_clear.render("Game Clear!",True,white)

text\_rect\_game\_clear = text\_game\_clear.get\_rect(center=(screen\_width // 2, screen\_height // 2))

screen.blit(text\_game\_clear, text\_rect\_game\_clear)

pygame.display.flip()

pygame.time.wait(2000)

pygame.quit()

sys.exit()