import pygame

import random

import sys

# Inicijalizacija pygame-a

pygame.init()

# Postavke ekrana

WIDTH, HEIGHT = 800, 600

screen = pygame.display.set\_mode((WIDTH, HEIGHT))

pygame.display.set\_caption("2D Shooter Game - Advanced")

# Boje

WHITE = (255, 255, 255)

BLACK = (0, 0, 0)

RED = (255, 0, 0)

BLUE = (0, 0, 255)

GREEN = (0, 255, 0)

# Igrač

player\_size = 50

player\_x = WIDTH // 2

player\_y = HEIGHT - player\_size - 10

player\_speed = 7

# Projektili

bullet\_size = 5

bullet\_speed = -10

bullets = []

# Neprijatelji

enemy\_size = 50

enemy\_types = ["normal", "fast", "zigzag"]

enemies = []

enemy\_speed = {

    "normal": 3,

    "fast": 5,

    "zigzag": 2

}

# Tajmer za stvaranje neprijatelja

enemy\_spawn\_time = 1000  # 1000 ms = 1 sekunda

last\_enemy\_spawn = pygame.time.get\_ticks()

# Rezultat

score = 0

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

def spawn\_enemy():

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

    enemy\_y = 0 - enemy\_size

    enemy\_type = random.choice(enemy\_types)

    enemies.append({"rect": pygame.Rect(enemy\_x, enemy\_y, enemy\_size, enemy\_size), "type": enemy\_type, "direction": random.choice([-1, 1])})

def draw\_text(text, x, y, color=WHITE):

    rendered\_text = font.render(text, True, color)

    screen.blit(rendered\_text, (x, y))

# Glavna petlja igre

running = True

while running:

    screen.fill(BLACK)

    # Igrač kontrola

    keys = pygame.key.get\_pressed()

    if keys[pygame.K\_LEFT] and player\_x > 0:

        player\_x -= player\_speed

    if keys[pygame.K\_RIGHT] and player\_x < WIDTH - player\_size:

        player\_x += player\_speed

    if keys[pygame.K\_SPACE]:

        bullets.append(pygame.Rect(player\_x + player\_size // 2, player\_y, bullet\_size, bullet\_size))

    # Kretanje projektila

    for bullet in bullets[:]:

        bullet.y += bullet\_speed

        if bullet.y < 0:

            bullets.remove(bullet)

    # Stvaranje neprijatelja

    if pygame.time.get\_ticks() - last\_enemy\_spawn > enemy\_spawn\_time:

        spawn\_enemy()

        last\_enemy\_spawn = pygame.time.get\_ticks()

    # Kretanje neprijatelja

    for enemy in enemies[:]:

        if enemy["type"] == "normal":

            enemy["rect"].y += enemy\_speed["normal"]

        elif enemy["type"] == "fast":

            enemy["rect"].y += enemy\_speed["fast"]

        elif enemy["type"] == "zigzag":

            enemy["rect"].y += enemy\_speed["zigzag"]

            enemy["rect"].x += enemy["direction"] \* 3  # Pomera se levo-desno

            if enemy["rect"].x <= 0 or enemy["rect"].x >= WIDTH - enemy\_size:

                enemy["direction"] \*= -1  # Menja pravac

        # Ako neprijatelj izađe iz okvira

        if enemy["rect"].y > HEIGHT:

            enemies.remove(enemy)

    # Detekcija sudara

    for bullet in bullets[:]:

        for enemy in enemies[:]:

            if bullet.colliderect(enemy["rect"]):

                bullets.remove(bullet)

                enemies.remove(enemy)

                score += 1

                break

    # Crtanje igrača, projektila i neprijatelja

    pygame.draw.rect(screen, GREEN, (player\_x, player\_y, player\_size, player\_size))

    for bullet in bullets:

        pygame.draw.rect(screen, WHITE, bullet)

    for enemy in enemies:

        color = RED if enemy["type"] == "normal" else BLUE if enemy["type"] == "fast" else WHITE

        pygame.draw.rect(screen, color, enemy["rect"])

    # Prikaz rezultata

    draw\_text(f"Score: {score}", 10, 10)

    # Provera događaja i izlaz iz igre

    for event in pygame.event.get():

        if event.type == pygame.QUIT:

            running = False

    # Ažuriranje ekrana

    pygame.display.flip()

    pygame.time.Clock().tick(30)

pygame.quit()

sys.exit()