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# Import Modules
import pygame
import random
import math

# Initialize Pygame
pygame.init()

# Screen
screen = pygame.display.set_mode((800, 600))

# Title and Icon
pygame.display.set_caption("Space Invaders")
icon = pygame.image.load('imgs/bullet.png')
pygame.display.set_icon(icon)

# Background
background = pygame.image.load('imgs/background.png')

# Background Music
pygame.mixer.music.load('sounds/background.wav')
pygame.mixer.music.play(-1)

# Player
playerimg = pygame.image.load('imgs/si.png')
pX = 360
pY = 480
pXchange = 0
pYchange = 0
speed = 4

def player(x, y):
    screen.blit(playerimg, (x, y))

# Enemy
enemyimg = []
eX = []
eY = []
eXchange = []
eYchange = []
num_of_enemy = 5

for i in range(num_of_enemy):
    enemyimg.append(pygame.image.load('imgs/alien.png'))
    eX.append(random.randint(100, 700))
    eY.append(random.randint(100, 300))
    eXchange.append(3)
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    eYchange.append(15)

def enemy(x, y, i):
    screen.blit(enemyimg[i], (x, y,))

# Bullet
bulletimg = pygame.image.load('imgs/bullet.png')
bX = pX
bY = pY
bYchange = -10
bState = 0  # Ready

def fire_bullet(x, y):
    global bState
    bState = 1 # Fire
    screen.blit(bulletimg, (x, y))

# Score
score = 0
font = pygame.font.Font('fonts/SF-Pro-Text-Regular.otf', 32)
sCoord = (10, 10)

def score_print(scr):
    screen.blit(font.render("Score: " + str(scr), True, (255, 255, 255)), sCoord)

def isCollision(eX, eY, bX, bY):
    distance = math.sqrt((bX - eX) ** 2 + (bY - eY) ** 2)
    if distance <= 30:
        return True
    return False

# Game Over Text
def game_over_text(scr):
    msg = pygame.font.Font('fonts/Inter-Regular.ttf', 64)
    mCoord = (208, 225)
    screen.blit(msg.render("Game Over!!!", True, (255, 255, 255)), mCoord)

    fs = pygame.font.Font('fonts/Inter-Regular.ttf', 32)
    fsCoord = (260, 325)
    screen.blit(fs.render("Your Final Score: " + str(score), True, (255, 255, 255)), fsCoord)

# Main Game Loop
running = True
while running:
    screen.fill((40, 40, 40))
    screen.blit(background, (0, 0))
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for event in pygame.event.get():
    # QUIT
    if event.type == pygame.QUIT:
        running = False

    if event.type == pygame.KEYDOWN:
        if event.key == pygame.K_LEFT: pXchange = -speed
        if event.key == pygame.K_RIGHT: pXchange = speed
        if event.key == pygame.K_UP: pYchange = -speed
        if event.key == pygame.K_DOWN: pYchange = speed
        if event.key == pygame.K_SPACE:
            bSound = pygame.mixer.Sound('sounds/laser.wav')
            bSound.play()
            bX, bY = pX, pY
            fire_bullet(bX, bY)

    if event.type == pygame.KEYUP:
        if event.key == pygame.K_LEFT or event.key == pygame.K_RIGHT:
            pXchange = 0
        if event.key == pygame.K_UP or event.key == pygame.K_DOWN:
            pYchange = 0

# Player Movement
pX += pXchange
pY += pYchange
if pX <= 0:
    pX = 736
elif pX >= 736:
    pX = 0
player(pX, pY)

# Enemy Movement
for i in range(num_of_enemy):
    # Game over
    if eY[i] >= 400:
        for j in range(num_of_enemy):
            eY[j] = 800
        game_over_text(score)
        break

    eX[i] += eXchange[i]
    if eX[i] >= 736:
        eY[i] += eYchange[i]
        eXchange[i] = -eXchange[i]
    if eX[i] <= 0:
        eY[i] += eYchange[i]
        eXchange[i] = -eXchange[i]
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    # Collision
    collision = isCollision(eX[i], eY[i], bX, bY)
    if collision:
        eX[i] = random.randint(100, 700)
        eY[i] = random.randint(100, 300)
        bState = 0
        score += 1
    enemy(eX[i], eY[i], i)

# Bullet Movement
if bState == 1:
    fire_bullet(bX, bY)
    bY += bYchange
    if bY <= 0:
        bState = 0

score_print(score)
# Screen Update
pygame.display.update()
```