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import os
import random
import sys
import pygame
from pygame.locals import *
import time

# Global Variables for the game
window_width = 600
window_height = 499

# set height and width of window
window = pygame.display.set_mode((window_width, window_height))
elevation = window_height * 0.8
game_images = {}
framepersecond = 32
fishimage = 'images/fish.png'
background_image = 'images/background.jpg'
black = 0, 0, 0
start_pos =(window_width/2, 0)
end_pos =(window_height/2,0)
line_width = 10
# Global Variable Time
start_time = 0
#Global Variable for Fish Parameters
fish_X = 0
fish_Y = 0
fish_Vel =0
#Global Variable for Rod Parameters
rod_X = 0
rod_y = 0
rod_Vel = 0
#Global Time Variables
start_time = 0
current_time = 0
duration = 60

# This program allows user to work on
# program where the game starts
if __name__ == "__main__":

    # For initializing modules of pygame library

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pygame.init()
framepersecond_clock = pygame.time.Clock()

# Sets the title on top of game window
pygame.display.set_caption('Catch Kit (A Fishing Game)')

# Load all the images which we will use in the game
# images for displaying score
game_images['scoreimages'] = (
    pygame.image.load('images/0.png').convert_alpha(),
    pygame.image.load('images/1.png').convert_alpha(),
    pygame.image.load('images/2.png').convert_alpha(),
    pygame.image.load('images/3.png').convert_alpha(),
    pygame.image.load('images/4.png').convert_alpha(),
    pygame.image.load('images/5.png').convert_alpha(),
    pygame.image.load('images/6.png').convert_alpha(),
    pygame.image.load('images/7.png').convert_alpha(),
    pygame.image.load('images/8.png').convert_alpha(),
    pygame.image.load('images/9.png').convert_alpha()
)

# Change this to club penguin background
game_images['background'] = pygame.image.load(background_image).convert_alpha()
#Depending on picture orientation, we might not need this
game_images['fishimage'] =
(pygame.transform.rotate(pygame.image.load(fishimage).convert_alpha(),180),pygame.image.l
oad(fishimage).convert_alpha())

print("WELCOME TO THE Catch Kit: A FISHING GAME ")
print("Press space to start the game")

while True:

    # place rod in the middle

    pygame.draw.line(surface, black, start_pos, end_pos, line_width)
    #horizontal = int(window_width/5)
    #vertical = int((window_height - game_images['flappybird'].get_height())/2)

    # Determine Serial Command of User
    ground = 0
    # Quit/ Start Events
    while True:

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        for event in pygame.event.get():

            # if user clicks on cross button, close the game
            if event.type == QUIT or (event.type == KEYDOWN and event.key
== K_ESCAPE):

                pygame.quit()

                # Exit the program
                sys.exit()

            # If the user presses space or up key,
            # start the game for them
            elif event.type == KEYDOWN and (event.key == K_SPACE):
                fishgame()

            # if user doesn't press anykey Nothing happen
            else:
                window.blit(game_images['background'], (0, 0))

                # Just Refresh the screen
                pygame.display.update()

                # set the rate of frame per second
                framepersecond_clock.tick(framepersecond)

# Create createFish Function
def createFish():
    fishWidth = game_images['fishimage'].get_width()
    fishX = window_width - fishWidth;
    # generating random starting height of fish
    fishY = random.randrange(0,window_height-game_images['fishimage'].get_height())
    fish_velocity = random.randint(1,20);
    return fish

# This would be the porition to check the colision between rod and bird
def isCollision(x1, x2, y1, y2):
    distance = math.sqrt((math.pow(x1 - x2,2)) +
                        (math.pow(y1 - y2,2)))
    if distance <= 5:
        return True
    else:
        return False

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# Fish and rod creation
# Checking if bird is above the sealevel.
def isGameOver():
    end_time = time.time()
    if (end_time - start_time >= duration):
        return True
    else:
        return False

## Define Game For Fish
def fishgame():
    your_score = 0
    horizontal = int(window_width/5)
    vertical = int(window_width/2)
    ground = 0
    mytempheight = 100

    # Generating fish on Window
    fish = createFish()

    while True:

        # Handling the key pressing events
        for event in pygame.event.get():
            if event.type == QUIT or (event.type == KEYDOWN and event.key ==
K_ESCAPE):
                pygame.quit()
                sys.exit()
            # Change to Serial Command Code
            if event.type == KEYDOWN and (event.key == K_SPACE or event.key ==
K_UP):
                if vertical > 0:
                    rod_velocity_y = rod_flap_velocity
                    #rod_flapped = True

                # Start time
                # Might Need to add code to reset
                start_time = time.time()
                # Check for Fish and Rod Colliding
                if(fish_X > 5):

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        if(isCollision(rod_X,fish_X, rod_Y, fish_Y)):
            imagefish =
rotate(pygame.image.load(fishimage).convert_alpha(),180),pygame.image.load(fishimage).conv
ert_alpha())

        #integrate movement with graphic
        your_score += 1
        print(f"Your your_score is {your_score}")
        newfish = createFish()
    else:
        fish_X += fish_Vel

# This function will return true if time is elapsed
game_over = isGameOver()
if game_over:
    return

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