How to move an image with the mouse in PyGame?

Last Updated : 26 Nov, 2021

Pygame is a Python library that is used to create cross-platform video games. The games created by Pygame can be easily run through any of the input devices such as a mouse, keyboard, and joystick. Do you want to make a game that runs through mouse controls? Don't you know how to move the image with the mouse in it? Don't worry, what you need to do is to declare the two values, i.e., running and moving. Once declared values, set what your app should do when it is in running state. Read the article given below to know more in detail.

Approach:

Step 1: First, import the library pygame.

```
import pygame
from pygame.locals import *
```

Step 2: Now, take the colors as input that we want to use in the game.

```
color_1 = #RGB value of color 1
color_2 = #RGB value of color 2
color_n = #RGB value of color n
```

Step 3: Then, construct a GUI game.

```
pygame.init()
```

Step 4: Further, set the dimensions of your GUI game.

```
w, h = #Width dimension, #Height dimension
screen = pygame.display.set_mode((w, h))
```

Step 5: Next, take the image as input which you want to move with the mouse

```
img = pygame.image.load('#Enter the image')
img.convert()
```

Step 6: Moreover, you can make your image look attractive by adding rectangle borders around it.

```
rect = img.get_rect()
rect.center = w//2, h//2
```

Step 7: Later on, set the running value for running the game and moving value for moving the image.

```
running = True
moving = False
```

Step 8: Set the things which you want your app to do when in running state.

```
while running:
    for event in pygame.event.get():
```

- **Step 8.1:** Once the app is in a running state, make it quit if the user wants to quit.

```
if event.type == QUIT:
    running = False
```

- **Step 8.2:** In case, the user doesn't want to quit, move your image around the dimensions of the GUI app.

```
elif event.type == MOUSEBUTTONDOWN:
    if rect.collidepoint(event.pos):
        moving = True
```

- **Step 8.3:** Next, set the moving value as False if you want to move the image only with the mouse click else set moving as True if you want to move the image without the mouse click.

```
        elif event.type == MOUSEBUTTONUP:
             moving = False
```

- **Step 8.4:** Further, set your image in a moving state if it has been once moved.

```
        elif event.type == MOUSEMOTION and moving:
             rect.move_ip(event.rel)
```

Step 9: Next, you need to set the screen color and image on the screen.

```
    screen.fill(YELLOW)
    screen.blit(img, rect)
```

Step 10: Further, make your image look attractive by constructing the border to the image.

```
    pygame.draw.rect(screen, BLUE, rect, 2)
```

Step 11: Furthermore, update the changes done in the GUI game.

```
    pygame.display.update()
```

Step 12: Finally, quit the GUI game.

```
  pygame.quit()
```

Below is the implementation.

Python

```python
# Python program to move the image
# with the mouse

# Import the library pygame
import pygame
from pygame.locals import *

# Take colors input
YELLOW = (255, 255, 0)
BLUE = (0, 0, 255)
```

```python
# Construct the GUI game
pygame.init()

# Set dimensions of game GUI
w, h = 640, 350
screen = pygame.display.set_mode((w, h))

# Take image as input
img = pygame.image.load('geek.jpg')
img.convert()

# Draw rectangle around the image
rect = img.get_rect()
rect.center = w//2, h//2

# Set running and moving values
running = True
moving = False

# Setting what happens when game
# is in running state
while running:

    for event in pygame.event.get():

        # Close if the user quits the
        # game
        if event.type == QUIT:
            running = False

        # Making the image move
        elif event.type == MOUSEBUTTONDOWN:
            if rect.collidepoint(event.pos):
                moving = True

        # Set moving as False if you want
        # to move the image only with the
        # mouse click
        # Set moving as True if you want
        # to move the image without the
        # mouse click
        elif event.type == MOUSEBUTTONUP:
            moving = False

        # Make your image move continuously
        elif event.type == MOUSEMOTION and moving:
            rect.move_ip(event.rel)
```

```
        # Set screen color and image on screen
        screen.fill(YELLOW)
        screen.blit(img, rect)

        # Construct the border to the image
        pygame.draw.rect(screen, BLUE, rect, 2)

        # Update the GUI pygame
        pygame.display.update()

# Quit the GUI game
pygame.quit()
```

Output:

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