How to create a text input box with Pygame?

Last Updated : 26 Mar, 2021

In this article, we will discuss how to create a text input box using PyGame.

Installation

Before initializing pygame library we need to install it. This library can be installed into the system by using *pip* tool that is provided by Python for its library installation. Pygame can be installed by writing these lines into the terminal.

We can install Pygame using command :

```
pip install pygame
```

Pygame can be used to create a text input box which will be explained step by step further in this article.

Approach

1. Use pygame.init() which will initialize all imported modules.
2. Set screen size.
3. Set font of the text which user will type.
4. Create a condition according to user key.
5. Also, declare two variable which will contain color name which will be further used for input color.
6. Also, store input in a variable to display on screen.
7. Now draw rectangle and pass argument which should be on screen.
8. Also, set the size of screen to be rendered.
9. Use clock.tick() which means that for every second at most given frames should be passed.

Functions Used

Function	Description
clock.tick()	It is used to refresh the frame in given second
pygame.exit()	It is used to quit game
pygame.init()	It is used to initialize all imported module
pygame.font.Font	Create a new Font object from a file
pygame.display.flip()	It will update only a portion of the screen to updated, not full area
screen.fill((r, g, b, a))	It will set the background color of the screen. The range is between 0 and 255.

Implementation

Python3

```
# import sys module
import pygame
import sys


# pygame.init() will initialize all
# imported module
pygame.init()

clock = pygame.time.Clock()

# it will display on screen
screen = pygame.display.set_mode([600, 500])

# basic font for user typed
base_font = pygame.font.Font(None, 32)
user_text = ''

# create rectangle
input_rect = pygame.Rect(200, 200, 140, 32)

# color_active stores color(lightskyblue3) which
# gets active when input box is clicked by user
```

```
color_active = pygame.Color('lightskyblue3')

# color_passive store color(chartreuse4) which is
# color of input box.
color_passive = pygame.Color('chartreuse4')
color = color_passive

active = False

while True:
    for event in pygame.event.get():

      # if user types QUIT then the screen will close
        if event.type == pygame.QUIT:
            pygame.quit()
            sys.exit()

        if event.type == pygame.MOUSEBUTTONDOWN:
            if input_rect.collidepoint(event.pos):
                active = True
            else:
                active = False

        if event.type == pygame.KEYDOWN:

            # Check for backspace
            if event.key == pygame.K_BACKSPACE:

                # get text input from 0 to -1 i.e. end.
                user_text = user_text[:-1]

            # Unicode standard is used for string
            # formation
            else:
                user_text += event.unicode

    # it will set background color of screen
    screen.fill((255, 255, 255))

    if active:
        color = color_active
    else:
        color = color_passive

    # draw rectangle and argument passed which should
    # be on screen
    pygame.draw.rect(screen, color, input_rect)

    text_surface = base_font.render(user_text, True, (255, 255, 255))
```

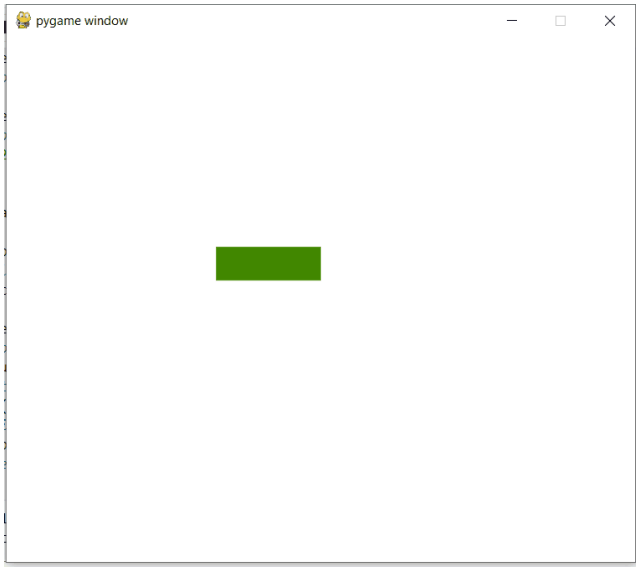
```
    # render at position stated in arguments
    screen.blit(text_surface, (input_rect.x+5, input_rect.y+5))

    # set width of textfield so that text cannot get
    # outside of user's text input
    input_rect.w = max(100, text_surface.get_width()+10)

    # display.flip() will update only a portion of the
    # screen to updated, not full area
    pygame.display.flip()

    # clock.tick(60) means that for every second at most
    # 60 frames should be passed.
    clock.tick(60)
```

Output:



Looking to dive into the world of programming or sharpen your Python skills? Our **Master Python: Complete Beginner to Advanced Course** is your ultimate guide to becoming proficient in Python. This course covers everything you need to build a solid foundation from fundamental programming concepts to advanced techniques. With **hands-on projects**, real-world examples, and expert guidance, you'll gain the confidence to tackle complex **coding challenges**. Whether you're starting from scratch or aiming to enhance your skills, this course is the perfect fit. Enroll now and master Python, the language of the future!

cheta...

14

Previous Article

Python | Display text to PyGame window

Next Article

Python | Display images with PyGame

Similar Reads

Adding Collisions Using pygame.Rect.colliderect in Pygame

Prerequisite: Drawing shapes in Pygame, Introduction to pygame In this article, we are going to use pygame.Rect.colliderect for adding collision in a shape usin...

3 min read

Working with Input box/Test Box in Selenium with Python

Selenium is an effective device for controlling an internet browser through the program. It is purposeful for all browsers, works on all fundamental OS and its...

1 min read

How to get keyboard input in PyGame ?

While using pygame module of Python, we sometimes need to use the keyboard input for various operations such as moving a character in a certain direction. To...

3 min read

Pygame - Input Handling

Pygame is a cross-platform set of Python modules designed for writing video games. It includes computer graphics and sound libraries designed to be used...

5 min read

Text Input box with a verification button in kivy

Kivy is a platform-independent GUI tool in Python. As it can be run on Android, IOS, linux and Windows etc. It is basically used to develop the Android...

3 min read

Text Input box with a verification button in kivy (using .kv file)

Kivy is a platform-independent GUI tool in Python. As it can be run on Android, IOS, linux and Windows etc. It is basically used to develop the Android...

3 min read

How to Get the Input From Tkinter Text Box?

Tkinter Text box widget is used to insert multi-line text. This widget can be used for messaging, displaying information, and many other tasks. The important task...

1 min read

Python | Display text to PyGame window

Pygame is a cross-platform set of Python modules designed for writing video games. It includes computer graphics and sound libraries designed to be used...

6 min read

Pygame - Working with Text

In this article, we will see how to play with texts using the Pygame module. We will be dealing here with initializing the font, rendering the text, editing the text...

5 min read

How to wrap text within Tkinter Text Box?

In this article, we will see that how can we wrap the text in the TKinter Text-Box using the Tkinter module Called textWrap Module. The textwrap module can be...

2 min read

Article Tags : Python Python-PyGame

Practice Tags : python

Tower K, Gulshan Vivante Apartment,
Sector 137, Noida, Gautam Buddh
Nagar, Uttar Pradesh, 201305