PyGame Tutorial

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Python PyGame library is used to create video games. This library includes several modules for playing sound, drawing graphics, handling mouse inputs, etc. It is also used to create client-side applications that can be wrapped in standalone executables.

This **Python PyGame tutorial** will help to learn the Pygame from basic to advance with the help of good and well-explained examples.

What is PYGame?

Pygame is a special tool that helps people to make fun and exciting video games using the Python. In PyGame, you can create your own computer game world using a set of tools. It includes computer graphics and sound libraries designed to be used with the Python programming language.

Turtle Tkinter Matplotlib Python Imaging Library Pyglet Python Numpy Pandas Python Database

- ***Programming languages:*** *Python, C, Cython, Assembly language*
- ***Developer:*** *Pete Shinners*
- ***License:*** *GNU Lesser General Public License*

- ***Stable release:*** *2.5.0 / 24 June 2023; 6 months ago*

PyGame Tutorial

To get the **latest stable version of pygame**, you can download it from this link.

Introduction

- Introduction to pygame
- Getting Started with Pygame
- How to install Pygame in Windows?
- Install Pygame on MacOS
- Interesting Facts about PYGAME

Getting Started

- PyGame – Import and Initialize
- How to initialize all the imported modules in PyGame?
- How to create an empty PyGame window?
- How to get the size of the PyGame Window?
- Allowing resizing window in PyGame
- How to change screen background color in Pygame?
- How to Change the Name of a Pygame window?
- How to set up the Game Loop in PygGame?
- How to change the PyGame icon?
- Pygame – Surfaces
- Pygame – Time

Drawing Shapes

- Pygame – Drawing Objects and shapes
- Python | Drawing different shapes on PyGame window
- How to draw a rectangle in Pygame?
- How to draw a rectangle with rounded corners in PyGame?

Event Handling

- Pygame – Event Handling
- How to add Custom Events in Pygame?

- Pygame – Input Handling
- How to get keyboard input in pygame?
- Python | Playing audio file in Pygame

Working with Text

- Pygame – Working with Text
- Python | Display text to PyGame window
- How to create a text input box with Pygame?

Working with images

- Python | Display images with PyGame
- Getting the width and height of an image in Pygame
- How to Rotate and Scale images using PyGame?
- Pygame – Flip the image
- How to move an image with the mouse in PyGame?
- How to use the mouse to scale and rotate an image in PyGame?

PyGame Advance

- How to Create Buttons in a game using PyGame?
- Python – Drawing design using arrow keys in PyGame
- Python – Moving an object in PyGame
- Python | Making an object jump in PyGame
- Adding Boundary to an Object in Pygame
- Collision Detection in PyGame
- Pygame – Creating Sprites
- Pygame – Control Sprites
- How to add color breezing effect using pygame?
- Playing audio files in Pygame

Exercise, Applications, and Projects

- How to add color breezing effect using pygame?
- Snowfall display using Pygame in Python
- Rhodonea Curves and Maurer Rose in Python
- Creating start Menu in Pygame
- Tic Tac Toe GUI In Python using PyGame

- Snake Game
- 8-bit game using pygame
- Bubble sort visualizer using PyGame
- Ternary Search Visualization using Pygame in Python
- Sorting algorithm visualization: Heap Sort
- Sorting algorithm visualization: Insertion Sort
- Binary Search Visualization using Pygame in Python
- Building and visualizing Sudoku Game Using Pygame

PyGame Tutorial – FAQs

Is pygame a language?

__pygame__ is a __free__, __open source__ library in python which is used for developing many visual multimedia application such as video games etc.

Is pygame better than Unity?

That depends on the type of game you want to develop. If you are a beginner in game development, you can create a simple 2D game, such as flip-flop, and for that, you should choose Pygame. On the other hand, if you aim to develop advanced games, then you should go for Unity.

Is pygame a library?

__Yes__, Pygame is a Python library that you can install using any Python package manager, such as YAML or pip.

How do I install pygame library?

To install Pygame, open the command prompt and give the command as shown below:

pip install pygame

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