# Programovanie hier.

## Porovnanie.

[9 Best Python Game Development Libraries/Frameworks [2025]](https://geekflare.com/dev/python-game-development-libraries-frameworks/)

Hodinu začať treba začať vysvetlením koľko možných iných modelov existuje namiesto PyGame, takže nie je to také jednoduché aby sme sa chceli venovať len nejakým typom úloh programovania hier.

[tutorials - pygame wiki](https://www.pygame.org/wiki/tutorials)

### Videa tutorials.

[Pygame Physics Tutorial 1](https://www.youtube.com/watch?v=7AKatTpNSNQ&list=PLE3D1A71BB598FEF6)

Vytvorenie triedy a prečo.

[Program Arcade Games With Python And Pygame](http://programarcadegames.com/)

Myšlienka:

<https://www.youtube.com/watch?v=JtICmt9Rs38&list=PLUjR0nhln8ubHF8yQe0kly1_00sM8S8Pv&index=2>

Retro gamming.

Podklady.

[lordmauve/pgzero: A zero-boilerplate games programming framework for Python 3, based on Pygame](https://github.com/lordmauve/pgzero)

## Virtuálne prostredie.

Pre vývoj tohto typu hier je potrebné nainštalovať podporné moduly napríklad:

pip install pygame

resp.

pip install pgzero – pozor Pgzero funguje s Python 3.12 a nie Python 3.13

## PGZero.

Transforming a **Pygame Zero (pgzero)** program into **Pygame** requires manually replacing pgzero-specific features with equivalent Pygame code. Here’s a general approach:

**Steps to Convert:**

1. **Remove pgzrun.go()**
   * Pygame Zero automatically handles the game loop, but in Pygame, you need to manually create one.
2. **Initialize Pygame**
   * Replace pgzero.builtins functions with Pygame equivalents:
   * import pygame
   * pygame.init()
   * screen = pygame.display.set\_mode((WIDTH, HEIGHT))
3. **Replace screen.draw with Pygame drawing functions**
   * Pygame Zero uses screen.draw.text(), screen.draw.circle(), etc.
   * Convert them to Pygame equivalents:
   * font = pygame.font.Font(None, 36)
   * text = font.render("Hello, Pygame!", True, (255, 255, 255))
   * screen.blit(text, (50, 50))
4. **Handle Events Manually**
   * Pygame Zero automatically detects key presses, but in Pygame, you need an event loop:
   * running = True
   * while running:
   * for event in pygame.event.get():
   * if event.type == pygame.QUIT:
   * running = False
5. **Replace Actor Objects**
   * Pygame Zero uses Actor("image"), but in Pygame, you load images manually:
   * player = pygame.image.load("player.png")
   * screen.blit(player, (x, y))
6. **Manually Update the Screen**
   * Pygame Zero automatically updates the screen, but in Pygame, you need:
   * pygame.display.flip()

Great question! **Pygame Zero (pgzero)** and **Pygame** are both Python libraries for game development, but they serve different purposes and have distinct features.

**Key Differences:**

1. **Ease of Use**
   * **Pygame Zero** is designed for beginners and removes a lot of boilerplate code.
   * **Pygame** requires more manual setup but offers greater flexibility.
2. **Game Loop Handling**
   * **Pygame Zero** automatically manages the game loop, so you don’t need to write while True loops.
   * **Pygame** requires you to manually handle events and screen updates.
3. **Built-in Functions**
   * **Pygame Zero** provides simple functions like screen.draw.text() and Actor(), making it easier to create games quickly.
   * **Pygame** requires explicit handling of images, fonts, and rendering.
4. **Customization & Complexity**
   * **Pygame Zero** is great for small projects and teaching programming.
   * **Pygame** is more powerful and allows for complex game mechanics.
5. **Documentation & Community**
   * **Pygame** has a larger community and more tutorials available.
   * **Pygame Zero** is newer and has fewer resources.

If you're just starting out, **Pygame Zero** is a great way to learn game development. But if you want full control over your game, **Pygame** is the better choice! 🚀

You can read more about the differences [here](https://new.pythonforengineers.com/blog/gaming-in-python-pygame-vs-arcade-vs-pygame-zero/) and check out a discussion on Reddit [here](https://www.reddit.com/r/learnpython/comments/hhbye4/pygame_or_pygame_zero/).

## PyGame.

[Making Games with Python & Pygame](https://inventwithpython.com/pygame/)

Podkladové informácie pre vytvorenie hier v PyGame.

Zdrojové kódy: <https://inventwithpython.com/pygame/downloads/>

Iné zdroje:

[KidsCanCode.org](https://kidscancode.org/lessons/)

[9 Easy Games to Make in Python (Perfect for Beginners)](https://www.idtech.com/blog/easy-games-to-make-in-python)

<https://www.sourcecodester.com/blog/14862/15-best-python-game-project-ideas-easy-learning.html>

### Snake.

<https://pythongeeks.org/python-pygame-snake-game/>

[How to Make a Snake Game in Python - The Python Code](https://thepythoncode.com/article/make-a-snake-game-with-pygame-in-python)

[**Snake Game in Python – Using Pygame module | GeeksforGeeks**](https://www.geeksforgeeks.org/snake-game-in-python-using-pygame-module/)

Kódy.

[snake\_ai/snake.py at 6e90078913f407b86c70aff1466a502352d7df7f · lfigil/snake\_ai](https://github.com/lfigil/snake_ai/blob/6e90078913f407b86c70aff1466a502352d7df7f/snake.py)

[Python\_Snake/Snake.py at 7c16d628dafcd1f256361e9e5e2df86ceab522ab · TanZeus/Python\_Snake](https://github.com/TanZeus/Python_Snake/blob/7c16d628dafcd1f256361e9e5e2df86ceab522ab/Snake.py)

[SnakeGame/game.py at b2b6e9f046f2e611f9f2bb2ba6880303a77100d2 · a276me/SnakeGame](https://github.com/a276me/SnakeGame/blob/b2b6e9f046f2e611f9f2bb2ba6880303a77100d2/game.py)