



## Physics Simulation



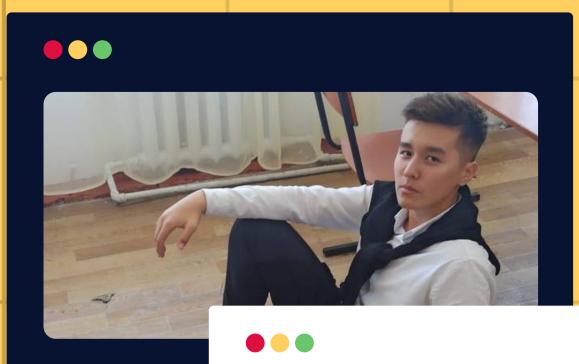
Presented By

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# why this topic?

Physics is limitless! I have been interested in physics since my early years, and modeling and simulation of physics is my element.

In the code I used a lot of constants and knowledge of physics helped me a lot. The theme itself is ideal for me, my theme and my project are the best





First I had to study the pygame, math, sys libraries closely.

I watched tutorials on YouTube and AITU materials, various projects on GitHub and I reached a perfect level



# where did i start?

And how to implement without a sketch? Of course, I thought a lot about what simulators I should make. And I settled on three games

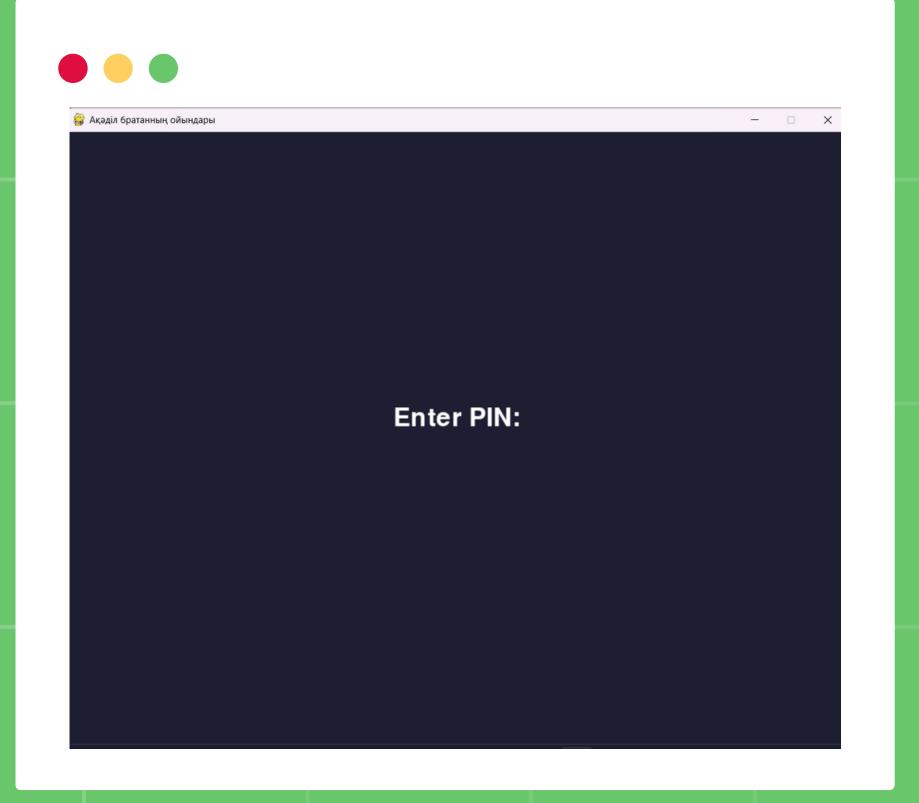
Made a menu for the game, logical connections, and so on **And the main thing is to enter via PIN code** 

# INNOVATION: Login via pin code

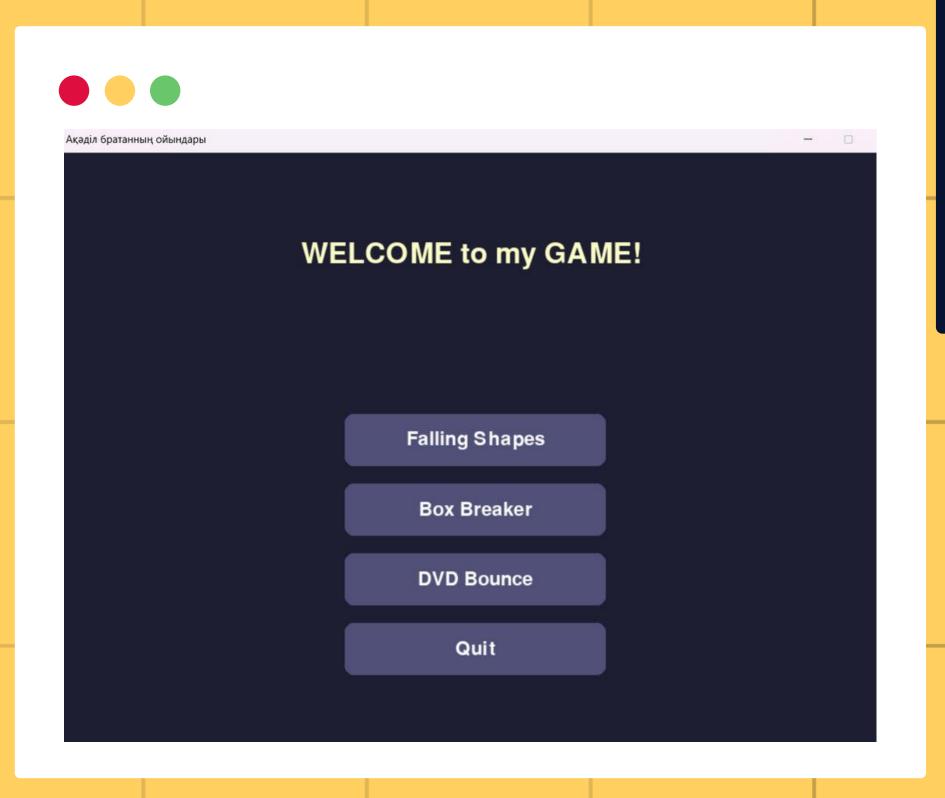


When we launch the game, we are greeted by such a window and asked to enter a pin code.

I suppose this is the innovation and relevance of my project



#### Menu:





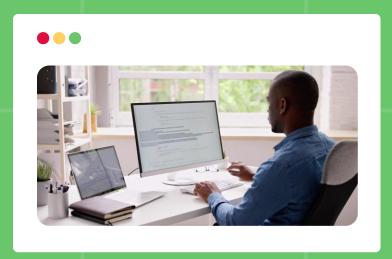
When you enter the correct PIN code, you will be redirected to the menu

You are greeted by a beautiful menu with enticing music.

You are offered 3 games:

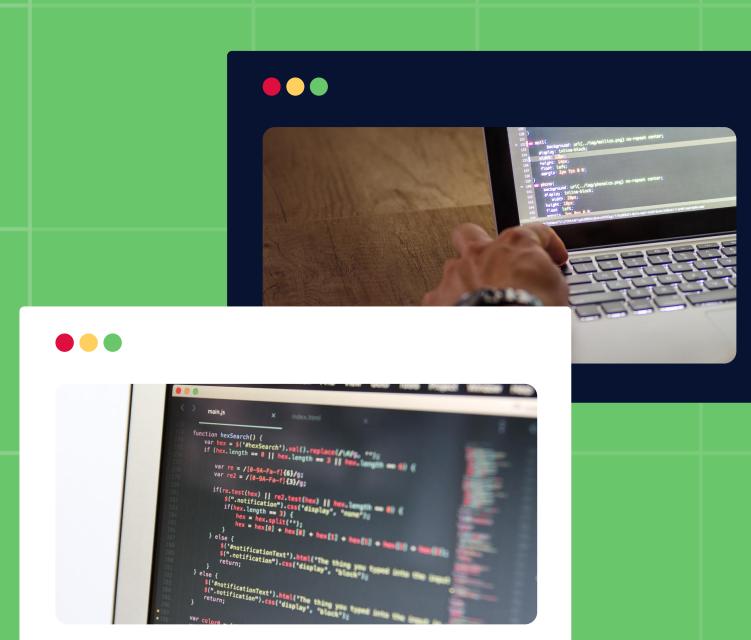
1. Falling Shapes, 2. Box Breaker, 3. DVD Bounce

and there is a button to exit (QUIT)



## Oops! Bugs!

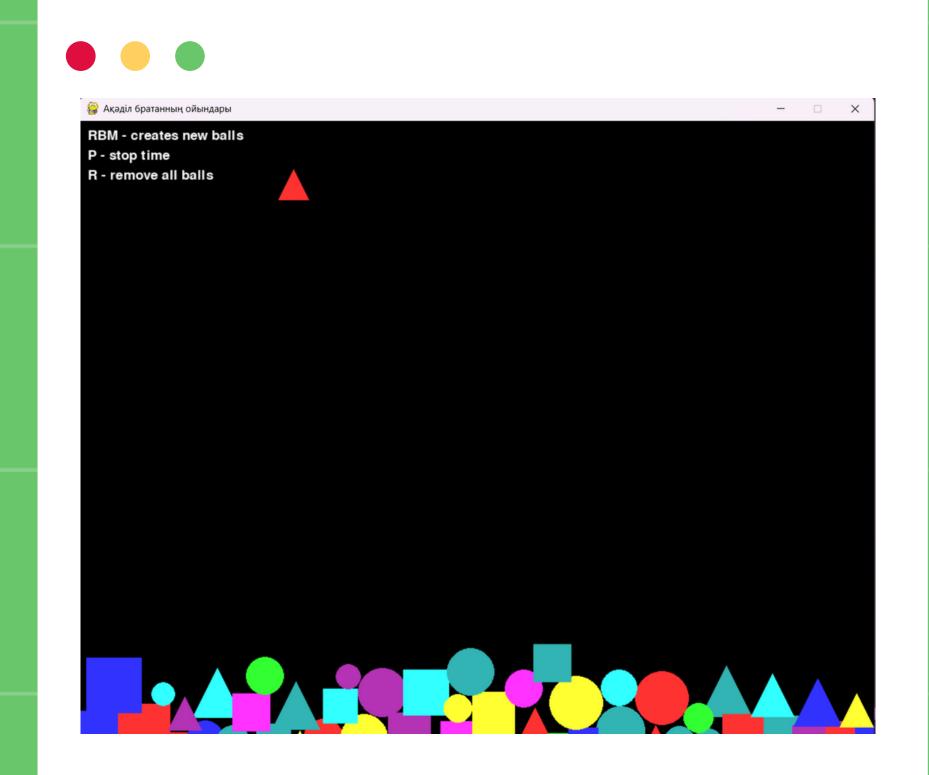
Everyone makes mistakes, even programmers! Sometimes there are errors in the code, called "bugs." Programmers need to find and fix these bugs to make their programs work properly. It's like being a detective!



## 1st game: FALLING SHAPES

The first game is falling figures, random three figures are served in a random shade.

They can also be controlled:  $\mathbf{P}$  - stop the time for the balls,  $\mathbf{R}$  - remove all and  $\mathbf{RBM}$  adds more figures.



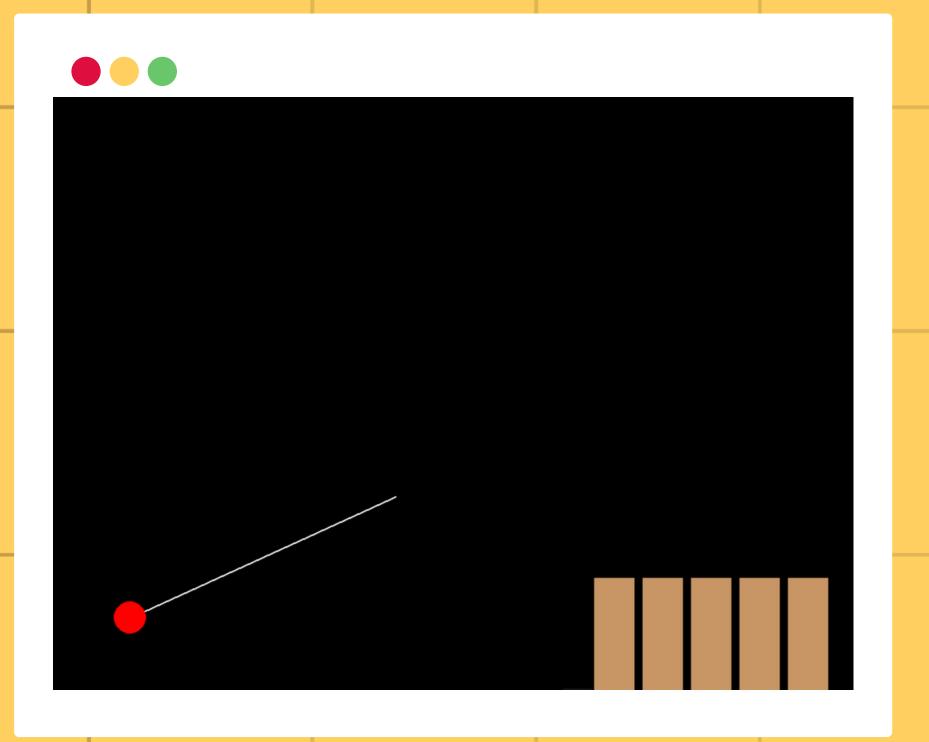


The second game is a realization of the legendary game **ANGRY BIRDS**.

The principle: shooting from a slingshot. The goal: to break all the boxes in a certain time

And you can also manage objects

## 2nd game: BOX BREAKER



# 3rd (last)game: DVD BOUNCE

It looks like a simple simulation of hitting the edges of the logo, but it hides all the potential of physics and probability theory

