

Square All aRound

June 2, 2023

1 Squares All aRound: A Pygame Game

Squares All aRound is an engaging pixelated game that challenges players to identify the odd square among a vibrant collection of four squares. The game uses the Pygame library to create a graphical user interface and handle user input.

1.1 Game Description

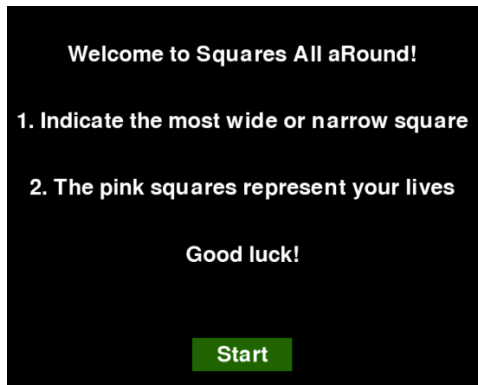
Squares All aRound comes with seven levels of increasing difficulty. Players must identify a unique square among four squares with varying widths. With every three consecutive correct guesses, players advance to the next level. Level 7 presents the ultimate challenge, offering endless variations in square widths. Test your visual perception, make accurate guesses, and strive for the highest score in Squares All aRound!

1.1.1 Game Mechanics

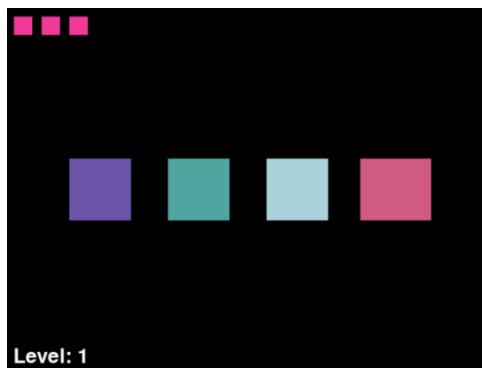
- The player starts with three lives, represented by three pink squares at the top of the screen.
- The game displays four squares, each with a randomly generated color.
- One of the squares has a different width from the others.
- The player must click on the square they believe is different from the other squares.
- If the player guesses correctly, they gain a point.
- If the player guesses incorrectly, they lose a life.
- After every three consecutive correct guesses, the player advances to the next level.
- Level 7 is the ultimate challenge, where the squares differ by only 1-2 pixels.
- The player can continue playing indefinitely or until they run out of lives.

1.1.2 Game outline

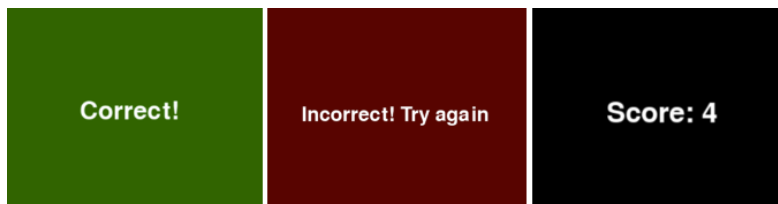
1. Start page with instructions:



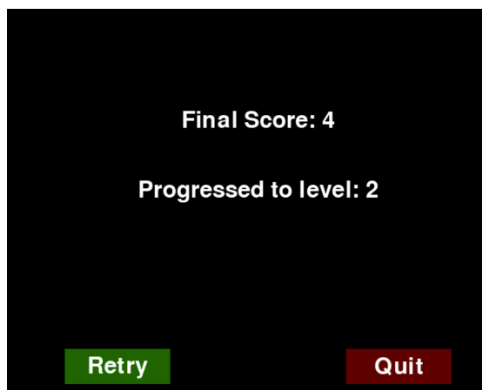
2. Gameplay:



3. Correct/Incorrect + score is briefly displayed on the screen:



4. If all three lives are lost, the game ends, and the final score is shown on the screen:



1.1.3 Gameplay

1. After reading the instructions, start the game by clicking “Start” with your mouse.
2. Click the square you believe to be different from the others in width
3. If correct, one point is awarded.
4. If incorrect, decrement a life and check if the player has run out of lives:
 - If yes, go to step 6.
 - If no, you get a set of four new squares.
5. The amount of correct answers within current level is checked within the game:
 - If you have three corrects and your level is below 7, you advance to the next level.
 - If you have less than three corrects, you get a set of four new squares.
6. Display the game over screen with the final score
 - If “Retry” is clicked: Game restarts
 - If “Quit” is clicked: Game window closes

2. Running The Code

To run this code, you will need to have Python and the Pygame library installed on your computer. Here are the steps to run the game:

1. Ensure Python 3.7 or higher is installed on your computer.
2. Ensure that you have a UI that can run pygame, e.g. PyCharm or Anaconda.
3. Install the Pygame library by running the following command in a terminal or command prompt:

```
[ ]: pip install pygame
```

3. Download the “Squares All aRound” game code.
4. Open a terminal or command prompt and navigate to the directory where the game code is located.
5. Run the game by executing the following command:

```
[ ]: python squaresgame.py
```

6. The game will launch, and you can start playing by clicking on the square you believe is different.

Enjoy playing Squares All aRound!