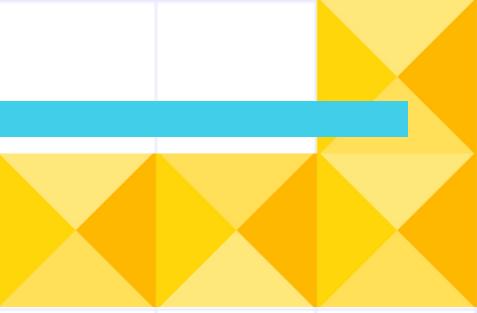


OOP PROJECT

TETRIS GAME



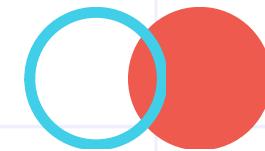
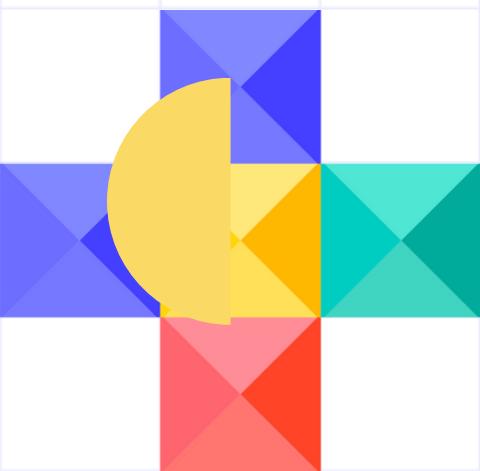
*Team
Member*

Tạ Vĩ Khang ITITU20226

Nguyễn Bá Phúc ITITU20278

Lê Hoàng Thái Tuấn ITITU20340

Huỳnh Thanh Thảo ITDSIU20126



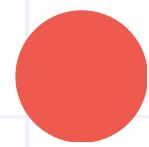


TABLE OF CONTENTS

01. IDEAS

- Why Tetris ?
- Core concept

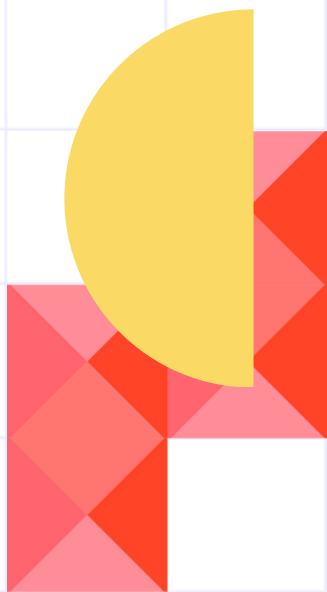
02. FEATURES IN GAME

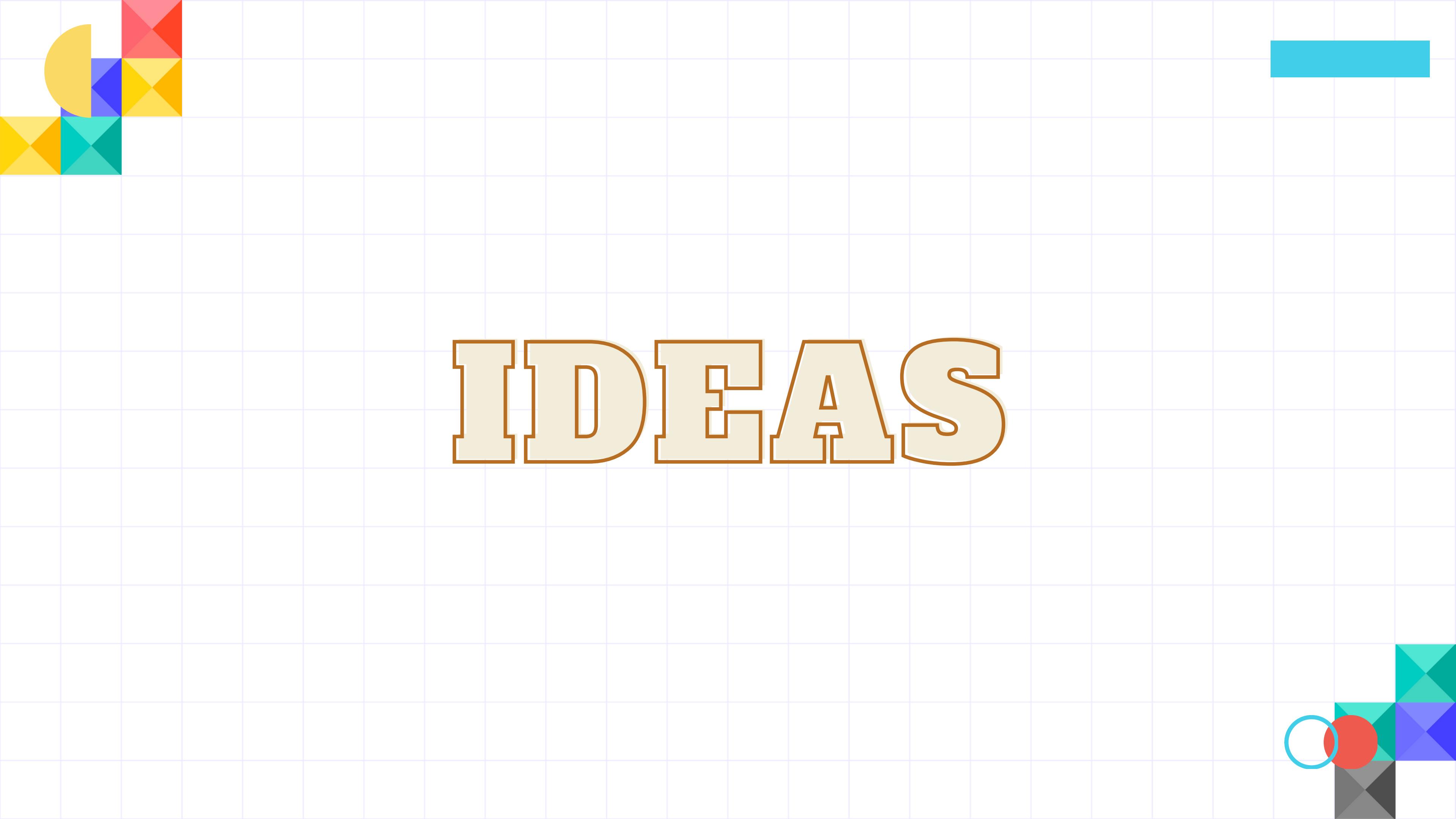
- Gameplay
- Game design
- User interface
- UML diagram
- References
- Github repository

03. FUTURE SCOPE

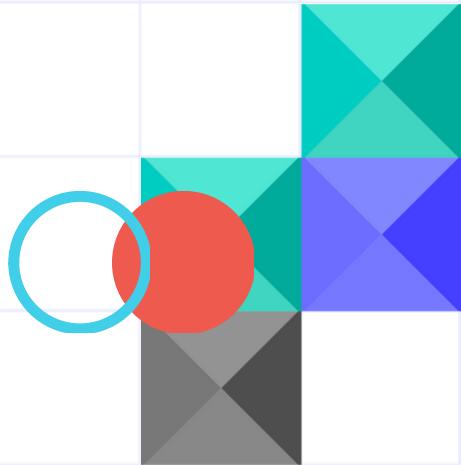
- Graphics
- Options (more)
- Multiplayers

04. CONTRIBUTION





IDEAS





WHY TETRIS ?

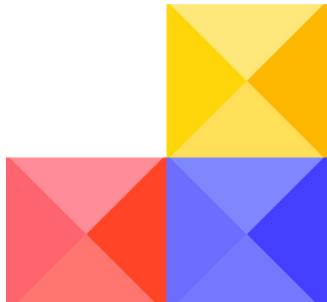


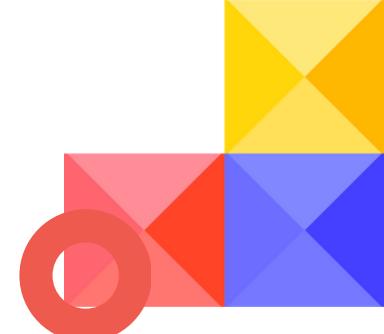
BE AVAILABLE

Multi-platform:
Window,macOS,
android,...

TRAIN YOUR BRAIN

Learn a lot of new and
creative knowledge
through this game





WHY TETRIS ?

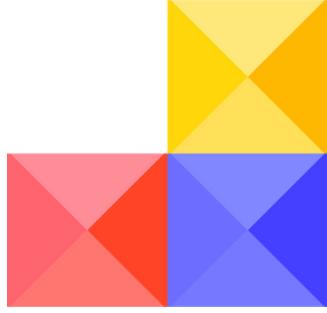


BE AVAILABLE

Multi-platform:
Window,macOS,
android,...



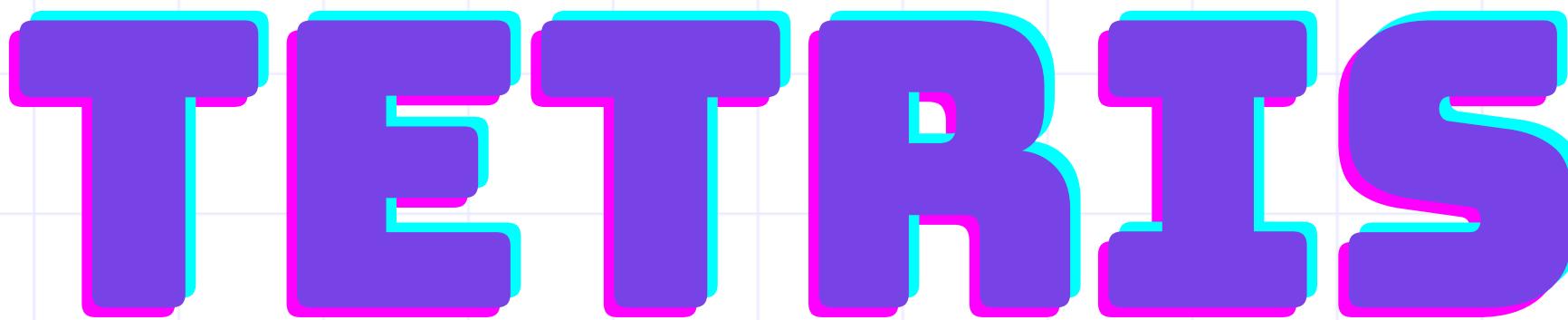
WHY TETRIS ?



- Improve mental health
 - Make decision quickly
- 

The Tetris logo, featuring the word "TETRIS" in a stylized font where each letter is composed of different colored blocks: T (red), E (yellow), R (green), and I (orange).

CORE CONCEPT

A large, stylized version of the Tetris logo, where the letters are formed by a grid of purple squares with cyan outlines.

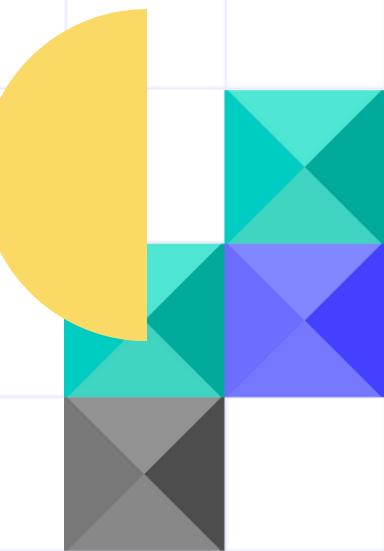
Tetris is a video game inspired by the classic puzzle game pentomino. The goal of this game is to fill the row bar and try to earn as many points as possible. Tetris makes use of a number of cognitive processes, such as pattern recognition, memorization, and matching, which is why we decided to create this game. Additionally, it promotes restraint, judgment, and problem-solving. A complex web of thinking processes is simultaneously activated and developed by this simple game.

FEATURES



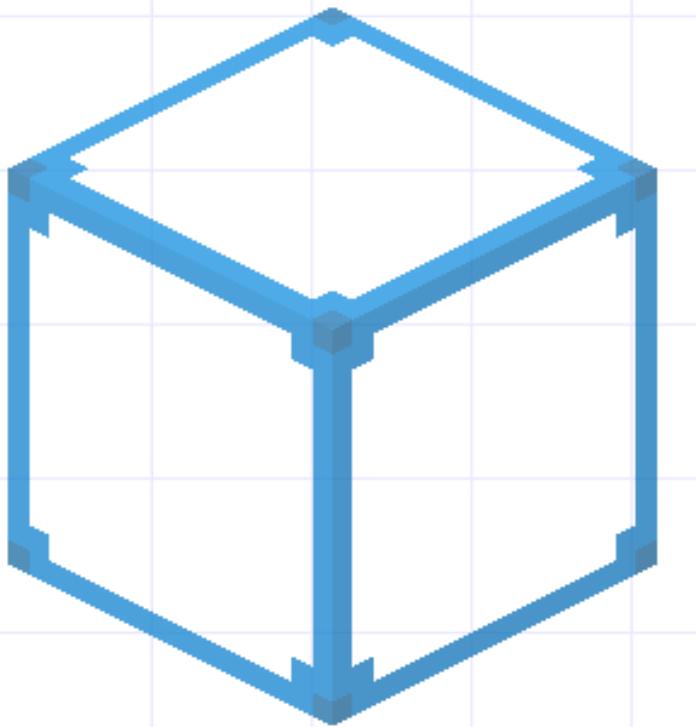
GAMEPLAY

The tetromino will be randomly created and the player will use the arrow keys from the keyboard to control them in suitable places in the ground. The player may continue by filling in the empty areas after the finished lines vanish and award them with points. When the uncleared lines reach the top of the playing field, the game is over. The player's score will increase the longer they can postpone this result.



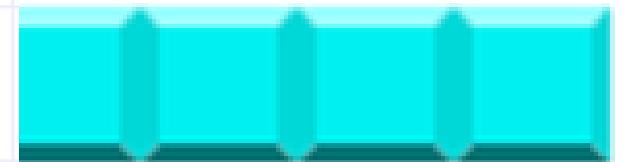
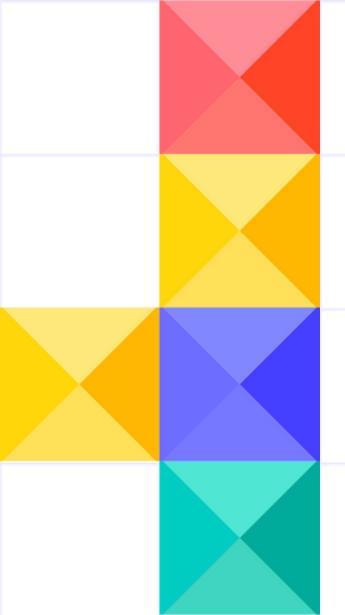
Game Design

Block

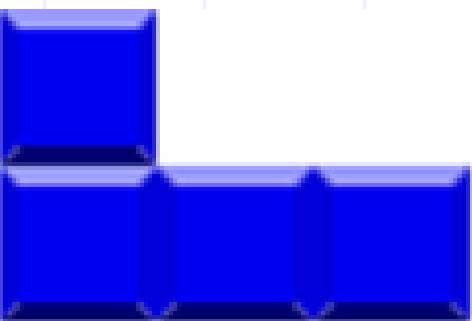


A TETRIS BLOCK HAS 4 SMALL BLOCKS

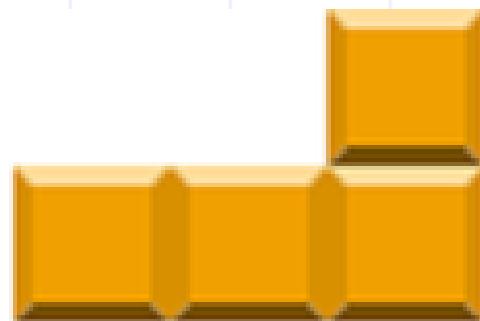
Shape



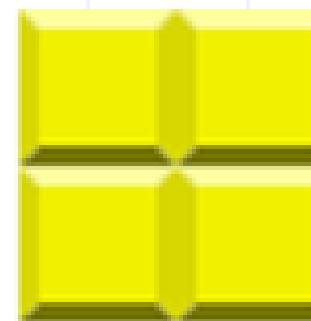
I-block



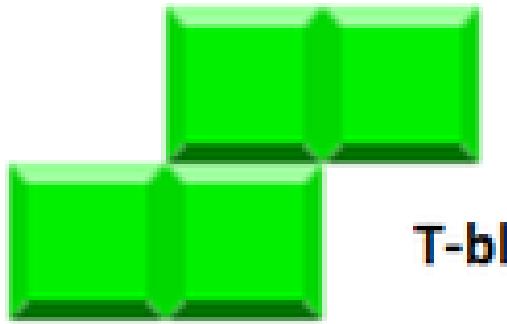
J-block



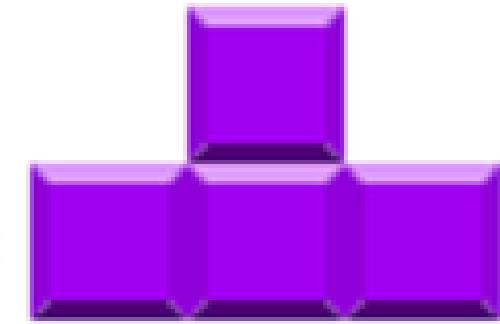
L-block



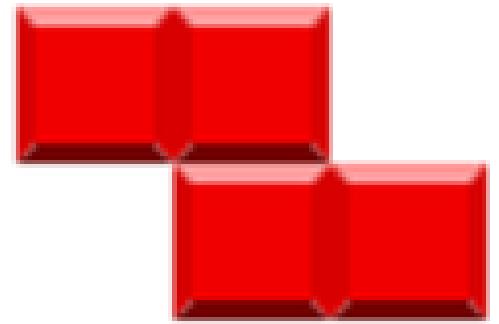
O-block



S-block



T-block

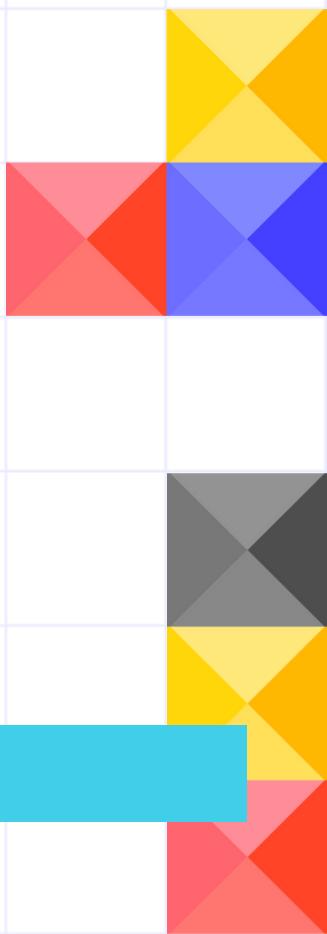
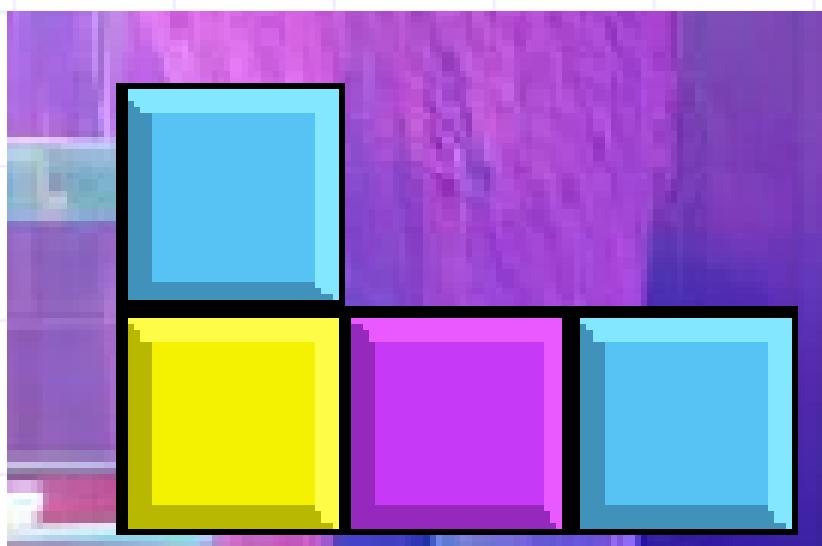
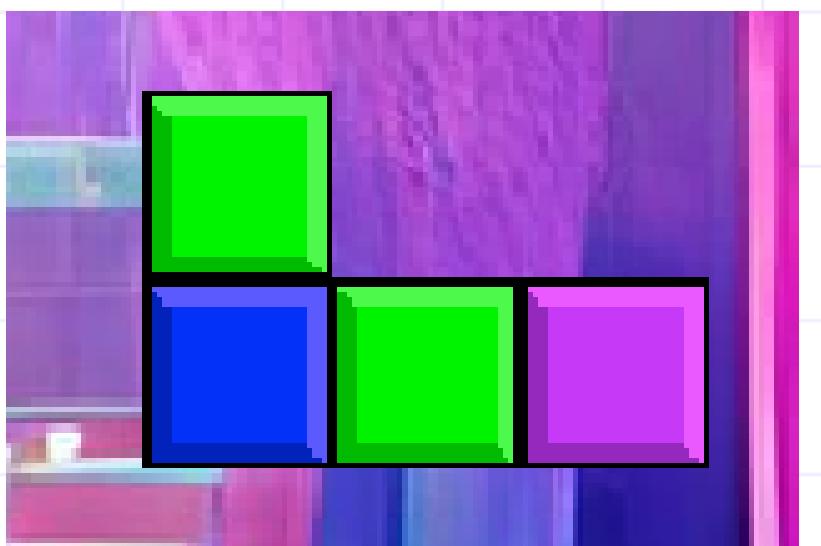


Z-block



CONTROL THE SHAPE OF 4 BLOCKS AND CREATE 7 SHAPES

SPECIAL SHAPE:



Board

OPERATE THE BLOCKS THAT LAND ON THE BOTTOM OF THE BOARD

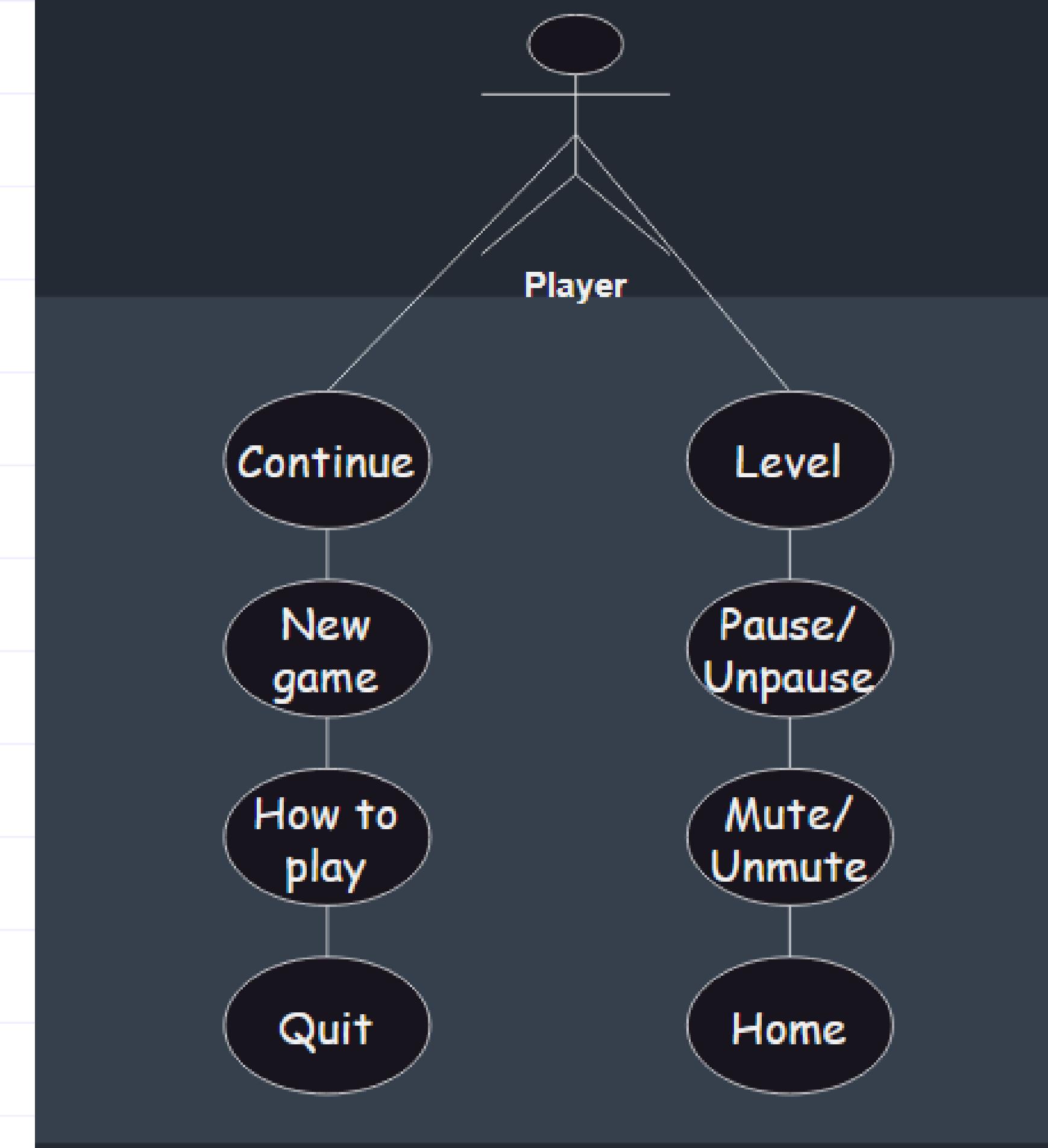


InGame

IT MANAGES MANY THINGS IN GAME LIKE LEVEL,POINT,
GAME OVER OR NOT,...



Use Case Diagram



Function

NEW GAME



CONTINUE



HOW TO PLAY



QUIT



LEVEL



PAUSE/UNPAUSE

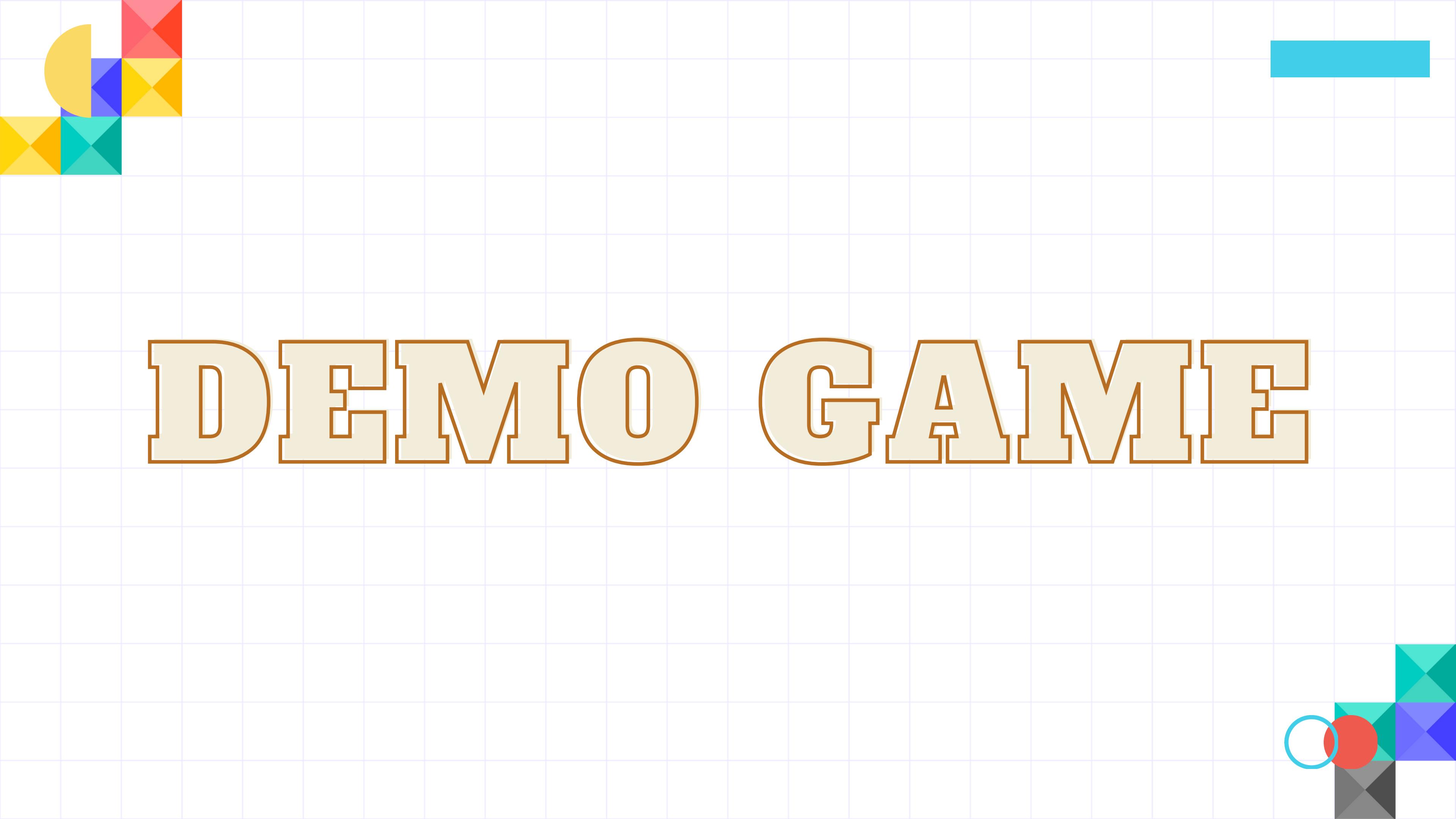


MUTE/UNMUTE

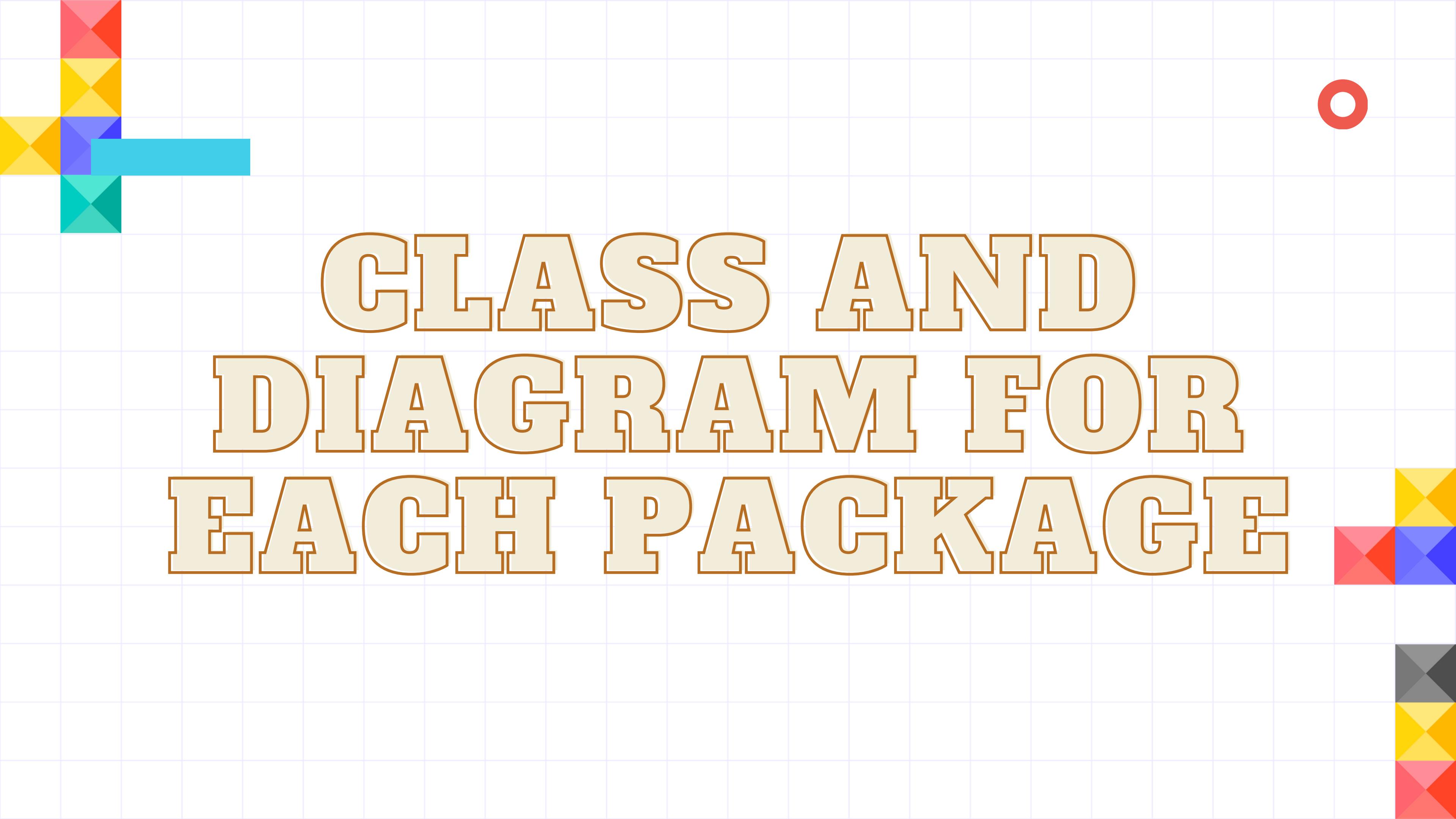


HOME





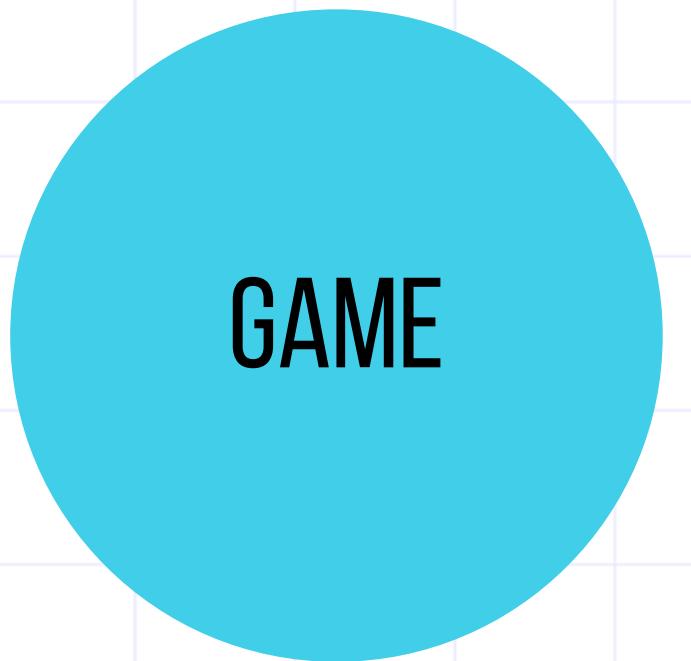
DEMO GAME



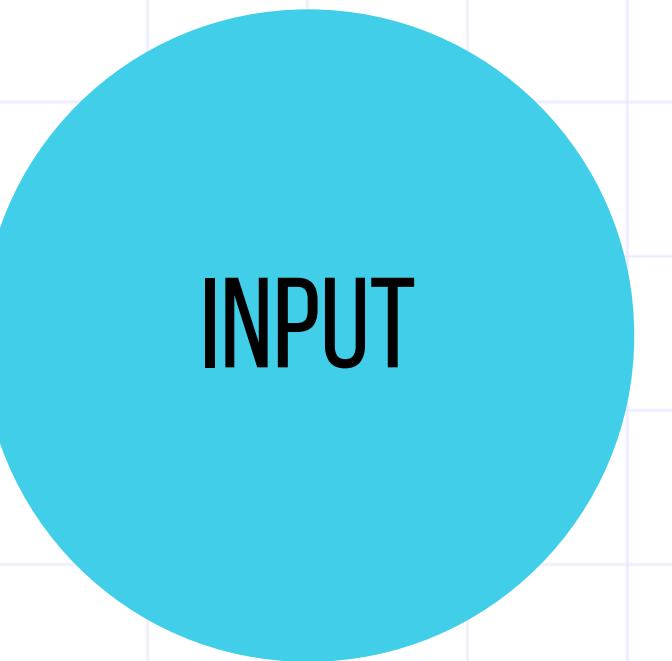
CLASS AND
DIAGRAM FOR
EACH PACKAGE

ENGINE

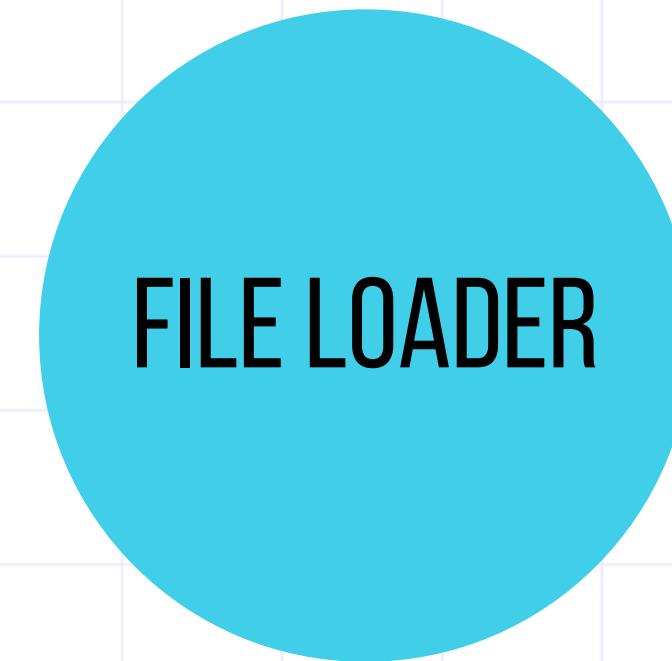
Engine.Class



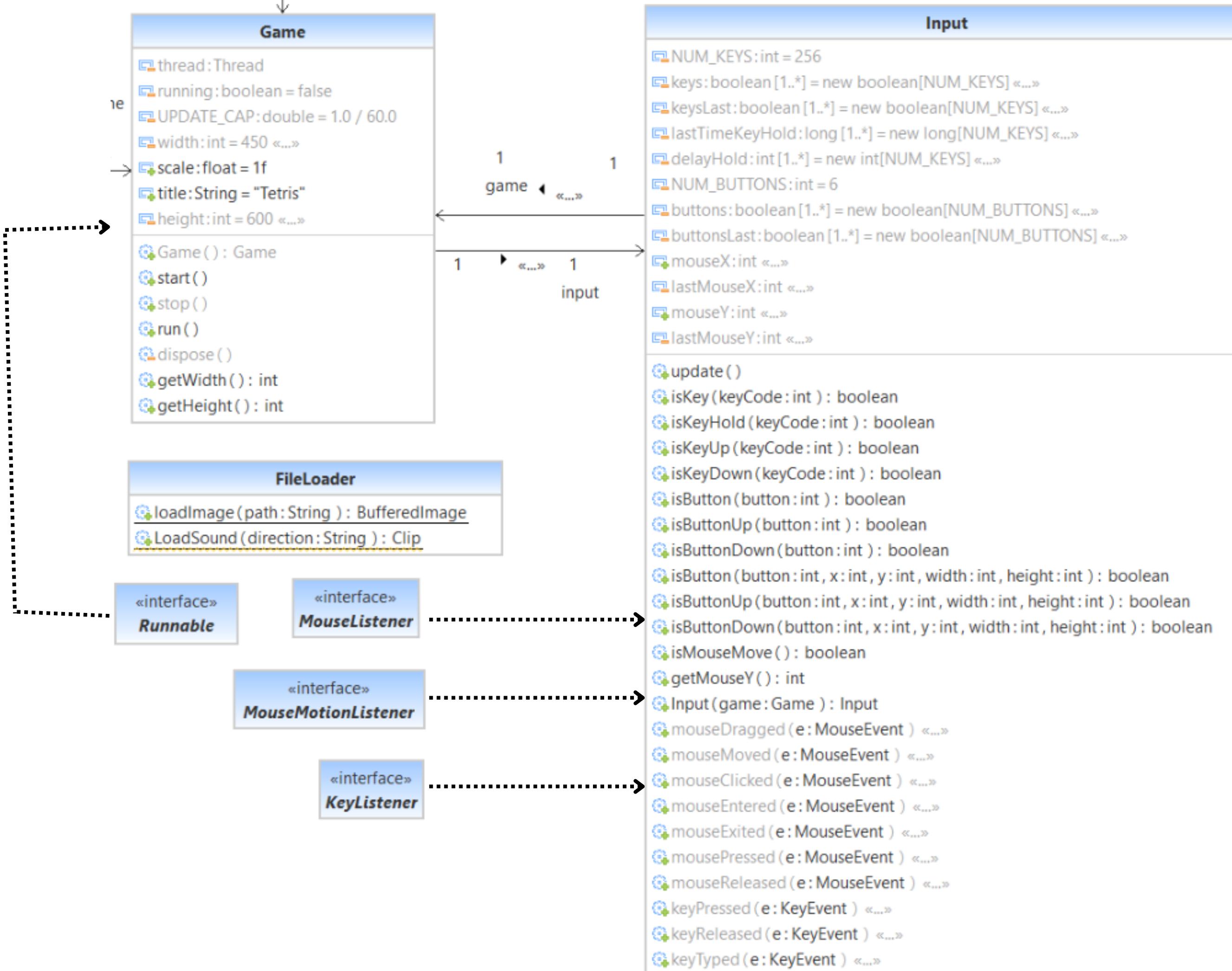
**Setup and launch
the game loop**



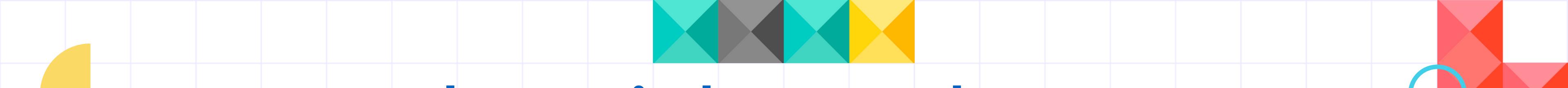
**Regconize the game's
events that are
occurring**



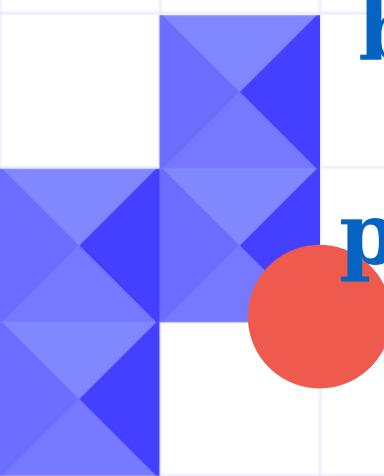
**Read the game's
data files**



Algorithm



Algorithm.Class



BLOCK

Declare
the
variable
color,
block size
and the
position of
a single
block.

BOARD

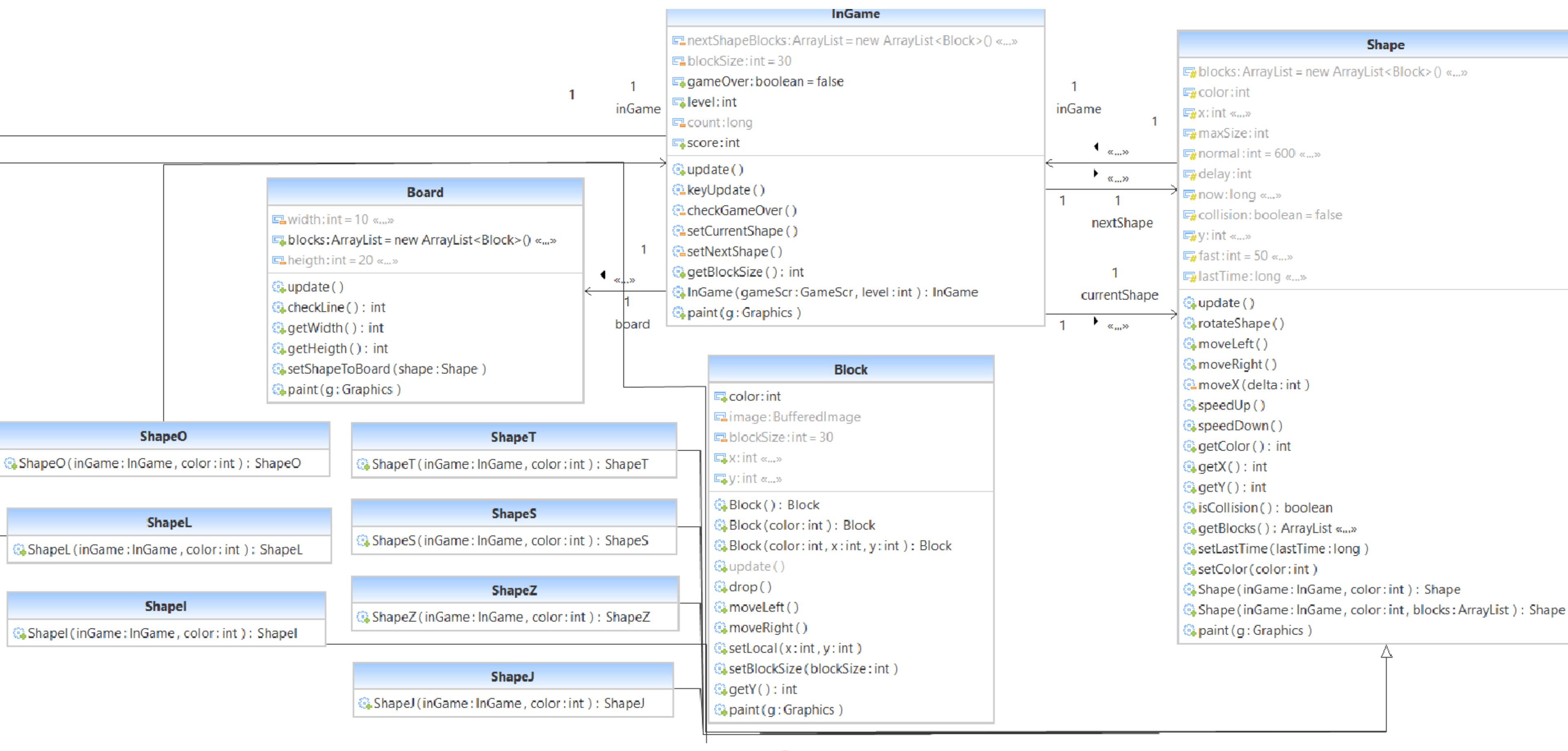
Contain the blocks

INGAME

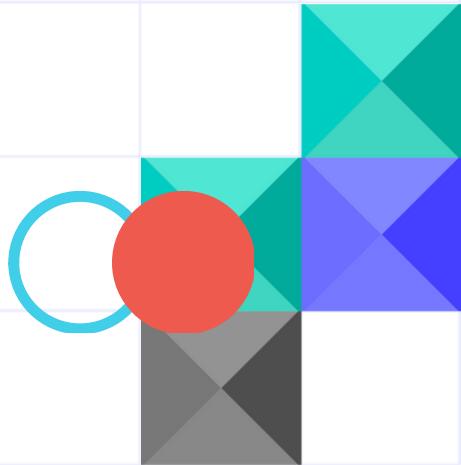
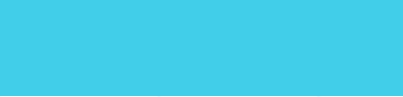
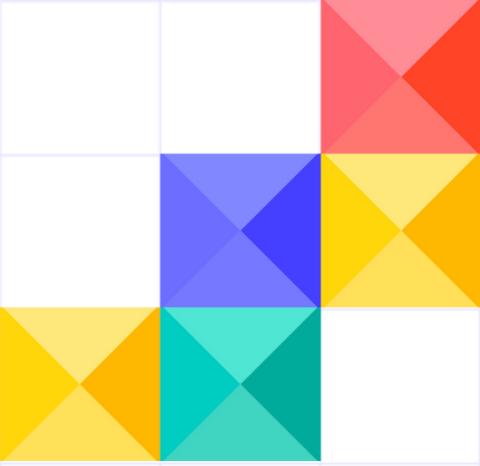
Create shapes,
tables, and criteria
to determine the
game's status

SHAPE

Create shapes
that inherit values
from block class



GUI



GUI.Class

MYBUTTON

Show
buttons on
the screen

WINDOW

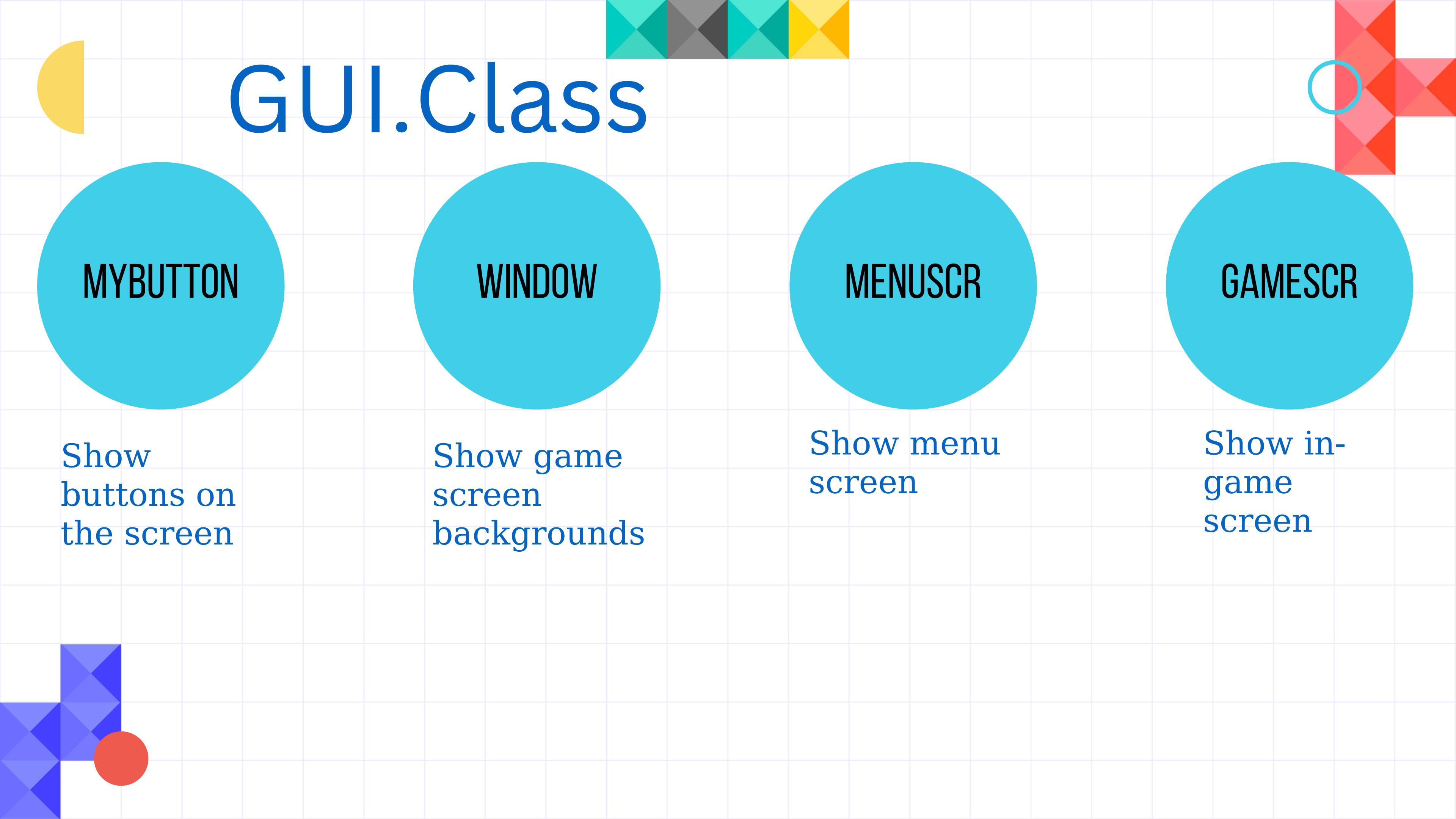
Show game
screen
backgrounds

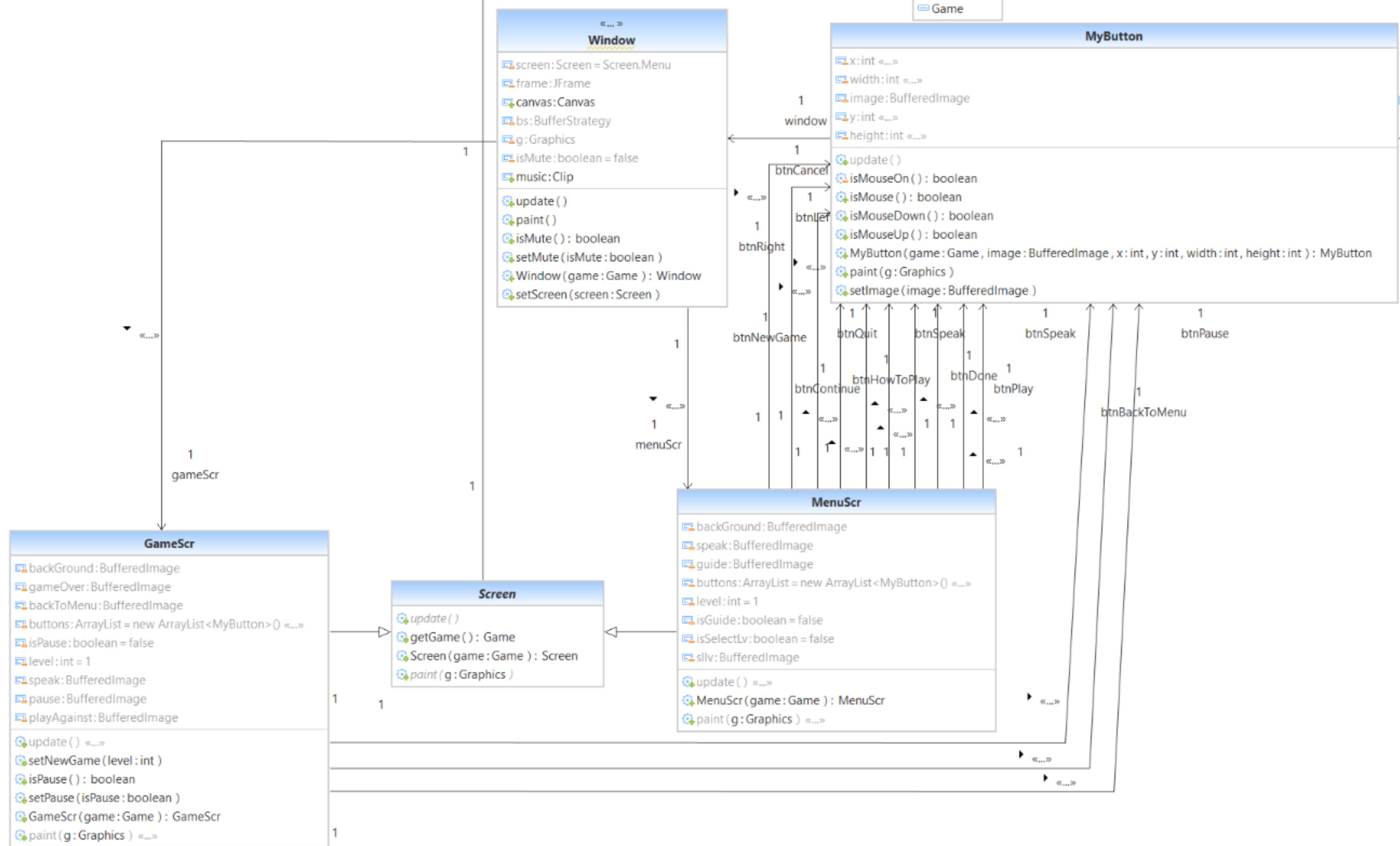
MENUSCR

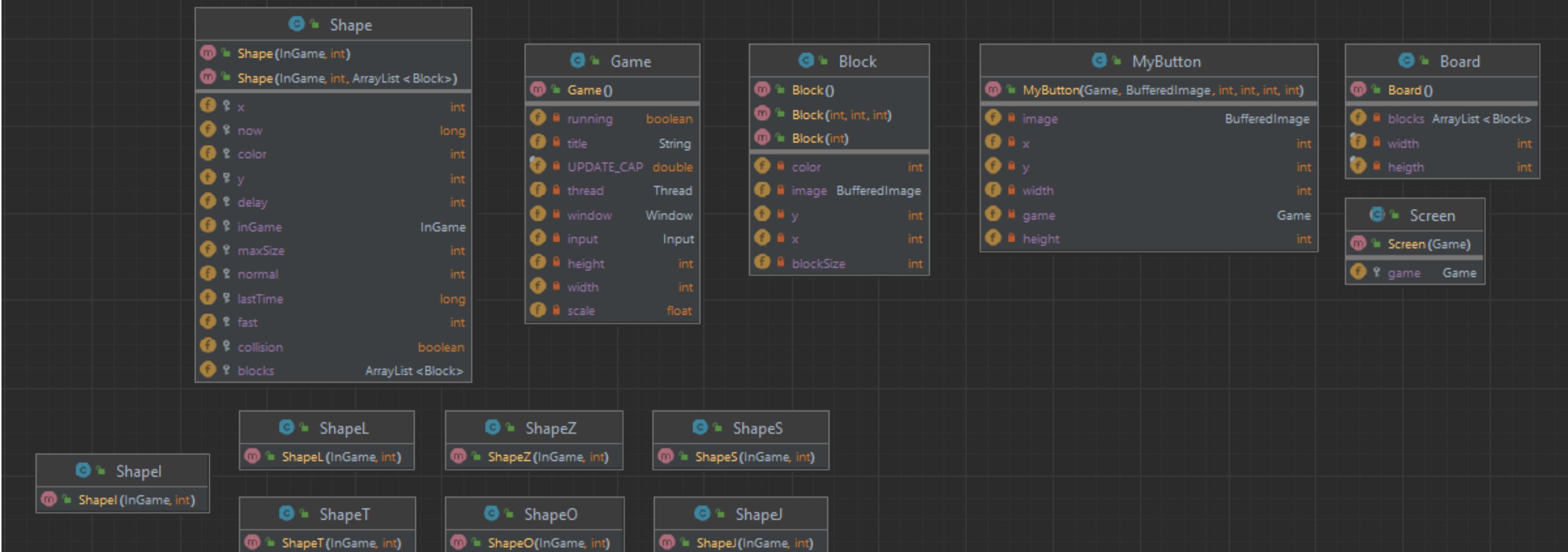
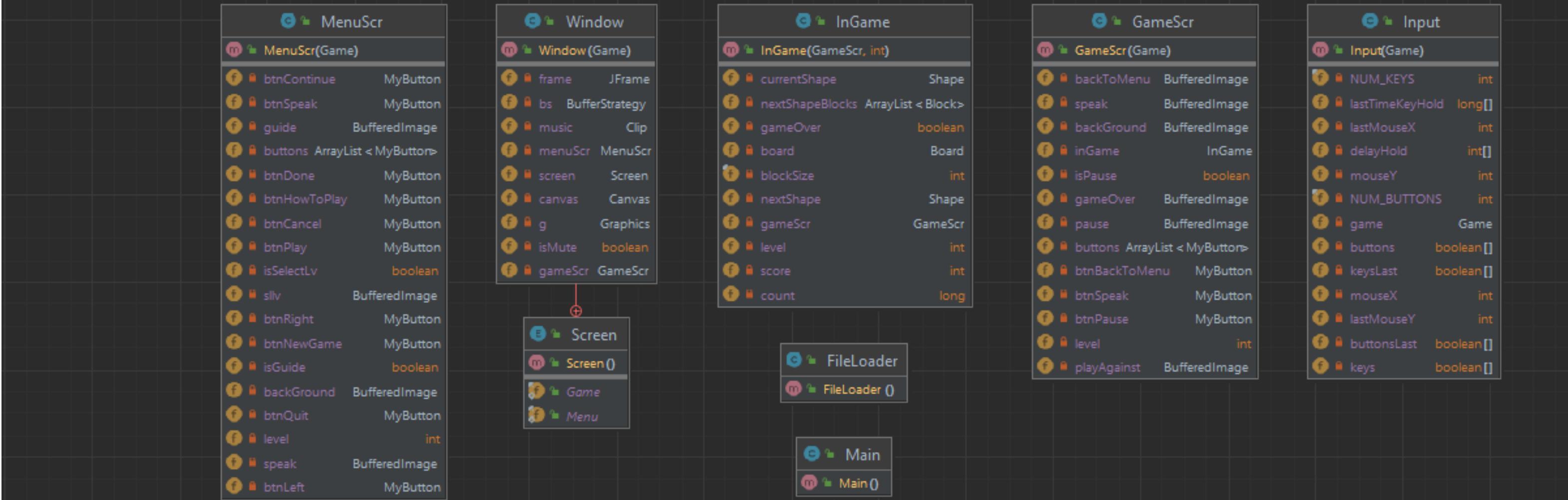
Show menu
screen

GAMESCR

Show in-
game
screen







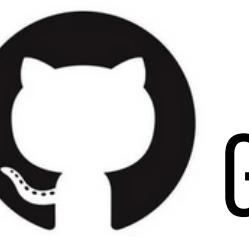
REFERENCES

GAME LOOP

[https://www.youtube.com/watch?
v=4iPEjFUZNsw&list=PL7dwpoQd3a8j6C9p5LqHzYFSkii
6iWPZF](https://www.youtube.com/watch?v=4iPEjFUZNsw&list=PL7dwpoQd3a8j6C9p5LqHzYFSkii6iWPZF)

ALGORITHM

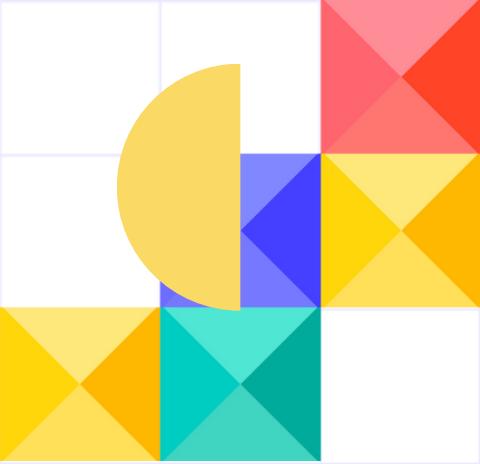
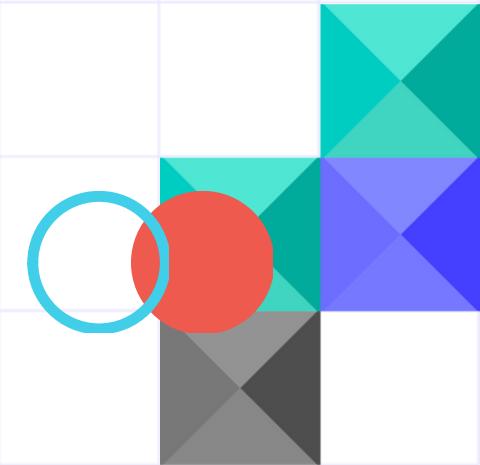
<https://github.com/janbodnar/Java-Tetris-Game>

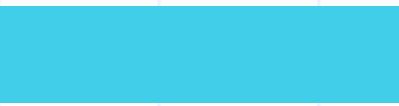
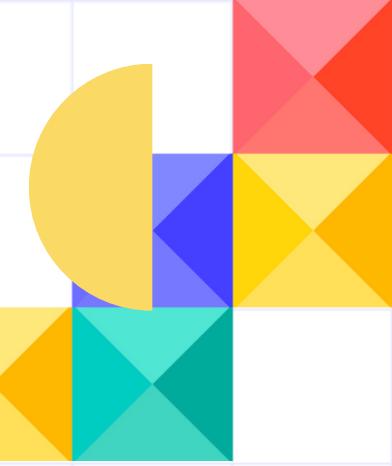


GITHUB REPOSITORY

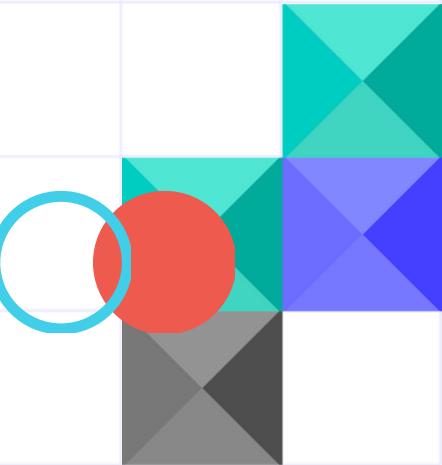
<https://github.com/TaViKhang/Tetris-Game-Project.git>

RESTRICTION

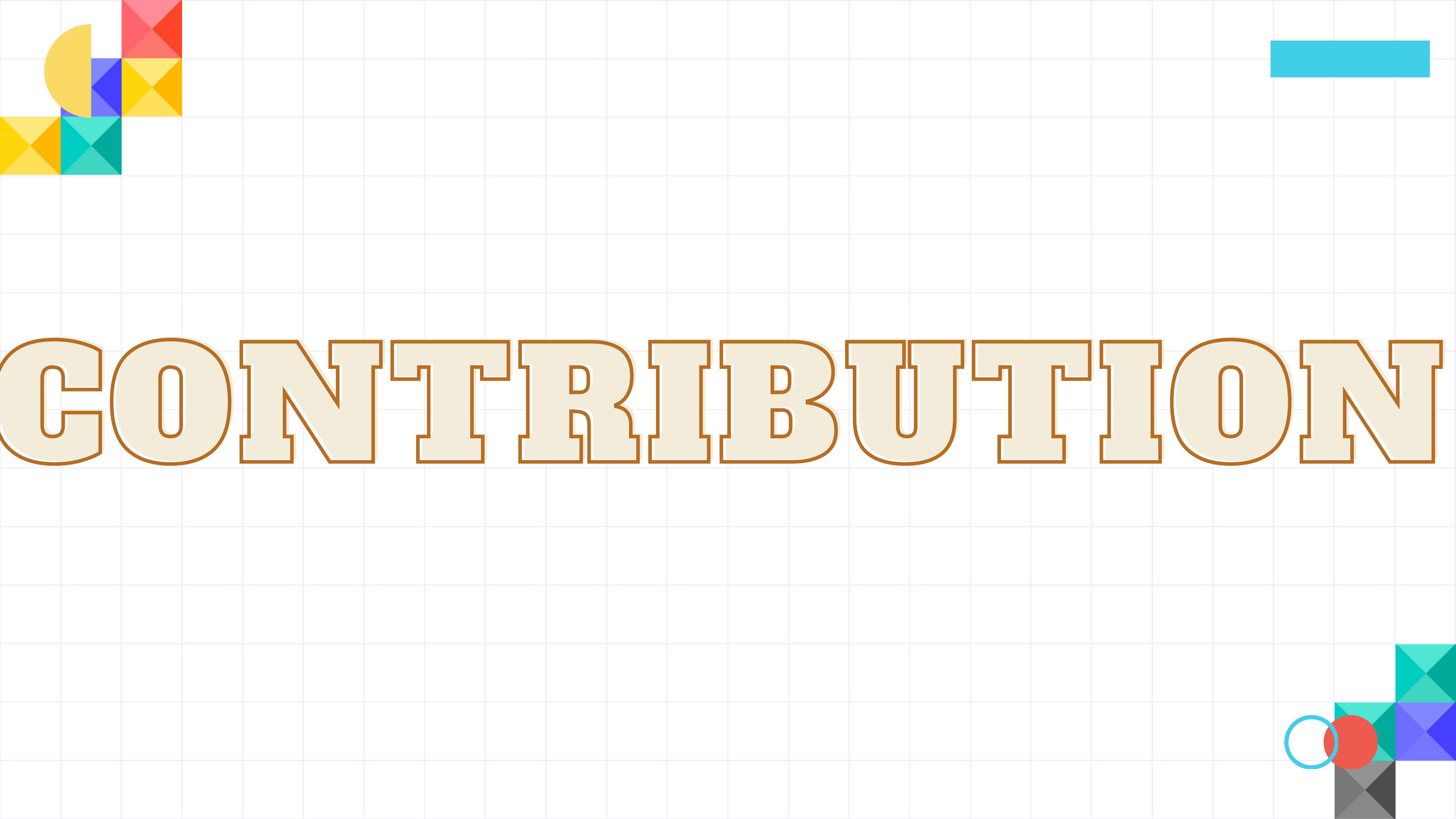
- 
- 
- THERE IS NO SAVE GAME OR EDIT GAME FUNCTION FOR PLAYERS.
 - ON A SINGLE MACHINE, THE GAME CAN ONLY BE PLAYED BY ONE PERSON
 - THE PLAYER CAN ONLY USE THE ARROW-DOWN TO PULL THE FORM QUICKER BUT NOT INSTANTLY.
- 



FUTURE SCOPE



- MAKE A HARD-DROP TO LET THE FORM FALL ONTO THE FIELD RIGHT AWAY.
- CREATE A STORE TO KEEP THE BLOCK THAT IS NO LONGER RELEVANT AND RE-USE IT IN THE APPROPRIATE SCENARIO.
- UPDATE GAME THAT PEOPLE CAN SHARE A KEYBOARD AND PLAY TOGETHER IN A DEVICE. THEY MAY ALSO PLAY ONLINE IN THE FUTURE.



CONTRIBUTION

4. CONTRIBUTION

Nguyễn Bá Phúc
• Conduct Algorithm
• Test Game

Huỳnh Thanh Thảo

- Main report writer
- Conduct GUI

25%

25%

25%

25%

Lê Hoàng Thái Tuấn

- Design gameplay,assets
- Support other parts

Tạ Vĩ Khang

- Conduct Engine
- Create loop game
- Manage team member
- Manage github
- Implement UML

THANKS !

