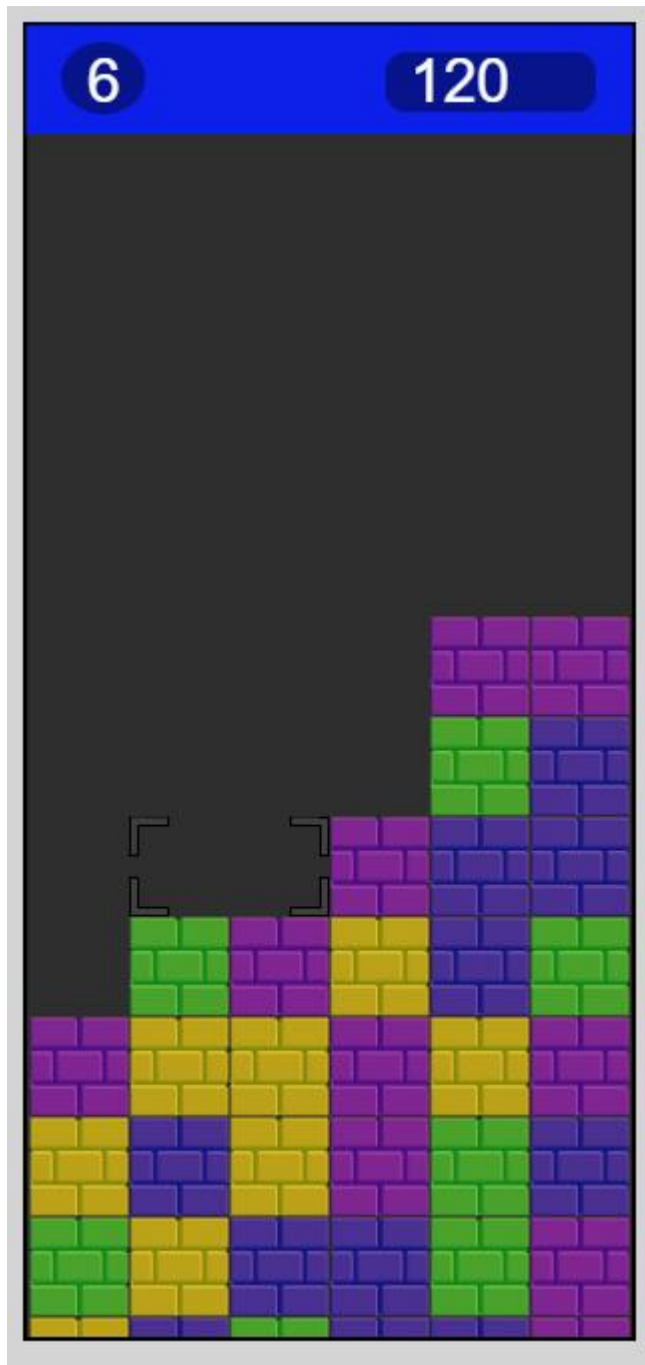


# PuzzleJS

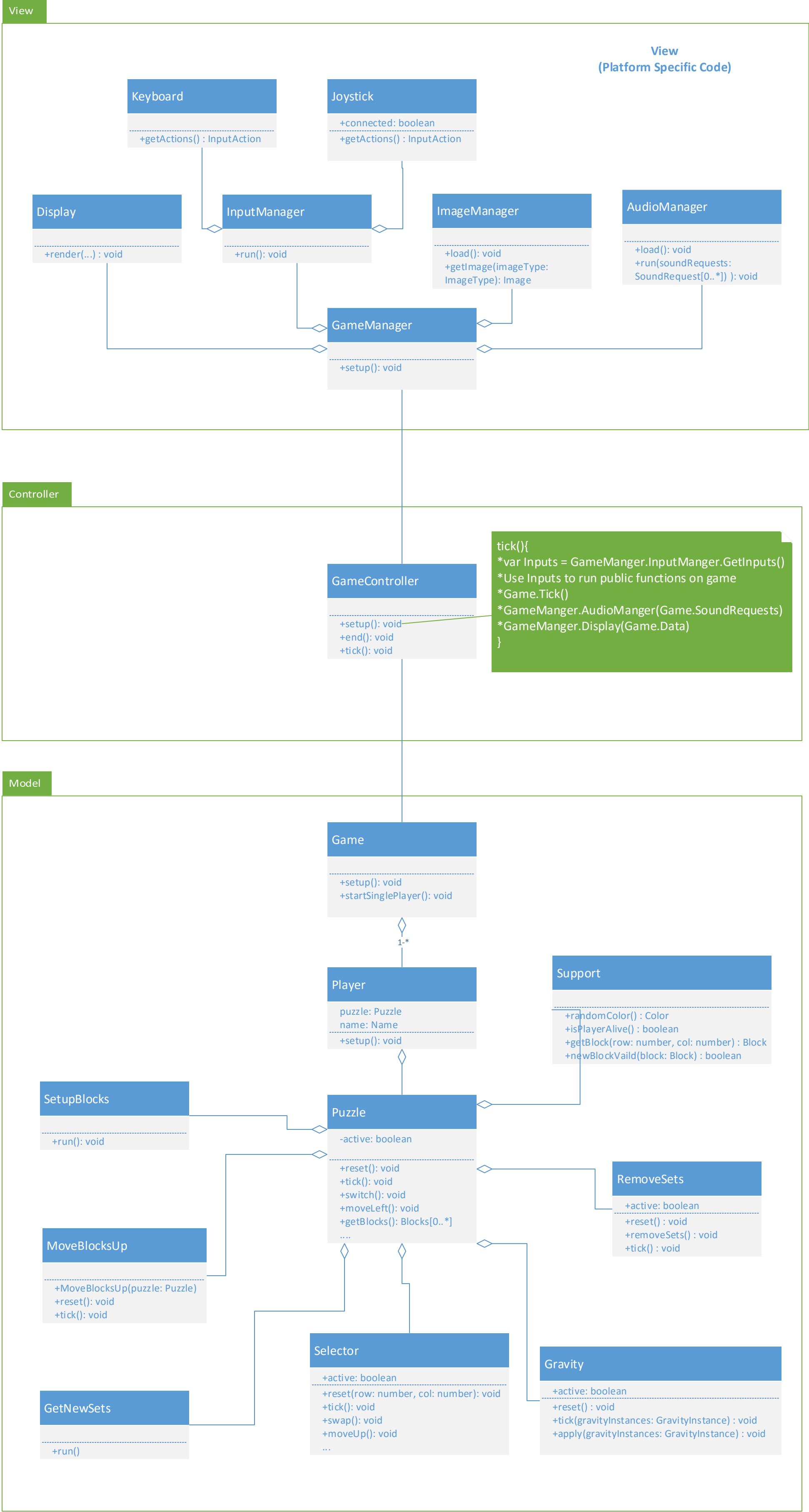


# About

- A Block Based Puzzle Game.
- The Blocks rise from the bottom, if they reach the top the game is over.
- To remove blocks you need 3 in blocks in arrow horizontally or vertically.
- Blocks fall to gravity
- You can swap to blocks that are next to each other in the same row
- Based off Pokémon Puzzle League

Early Prototype: <http://puzzeljs.azurewebsites.net/>

# Overview



# Application



# Enumerations

<<enumeration>>  
KeyState

None  
Down  
Up

---

<<enumeration>>  
BlockState

None  
Swap  
Gravity  
Remove

---

<<enumeration>>  
Button

A  
B  
X  
Y  
LeftTrigger  
DPadLeft  
DPadRight  
DPadUp  
DPadDown

---

<<enumeration>>  
ImageTypes

GreenBlock  
BlueBlock  
RedBlock  
PurpleBlock  
YellowBlock  
Selector  
Layout

---

<<enumeration>>  
BlockColor

Green  
Blue  
Red  
Purple  
Yellow

---

<<enumeration>>  
Key

A  
D  
F  
R  
S  
W  
Space  
Left  
Right  
Up  
Down

---

<<enumeration>>  
ButtonState

None  
Down  
Up

---

<<enumeration>>  
SoundRequest

MusicOn  
MusicOff  
Pause  
Resume  
SwapEffect  
FallEffect  
GetSetEffect

---

# DataTypes

Block
<div>+row : number</div> <div>+col: number</div> <div>+color: BlockColor</div> <div>+state: BlockState</div> <div>+ticksToRemove: number</div> <div>+removeTick: number</div> <div>+Block(row : number, col: number, color: BlockColor, state: BlockState)</div>

Block:  
This is a block in the puzzle.  
Its always in a row and col.

BlockAttacks
<div>+special:number</div> <div>+six:number</div> <div>+five:number</div> <div>+four:number</div> <div>+three:number</div> <div>+BlockAttacks(special:number,six:number, five:number, four:number, three:number)</div>

Block Attacks:  
When a Player Gets a combo/chain and is not playing single palyer, It creates a BlockAttacks and sends it to the the other player.

GravityInstance
<div>+tick: number</div> <div>+blocks: Block[0..*]</div> <div>+GravityInstance(tick: number, blocks: Block[0..*]): void</div>

GravityInstance:  
When Any Blocks are detected that they should fall, they are added to a gravity Instance.  
After 10 ticks the gravity drops the blocks.

RemoveSet
<div>+chain: number</div> <div>+tick: number</div> <div>+endTick: number</div> <div>+RemoveSet(chain: number, tick: number, endTick: number)</div>

RemoveSet:  
When a set of blocks are removed, a RemoveSet is created.  
If after they fully remove and gravity happens, a new set is found. it adds to the chain.

JoystickState
<div>+R: ButtonState</div> <div>+A: ButtonState</div> <div>+Up: ButtonState</div> <div>+Down: ButtonState</div> <div>+Left: ButtonState</div> <div>+Right: ButtonState</div> <div>JoystickState()</div>

ControllerState:  
The state of a controller (ex: xbox controller) at a given point in time.

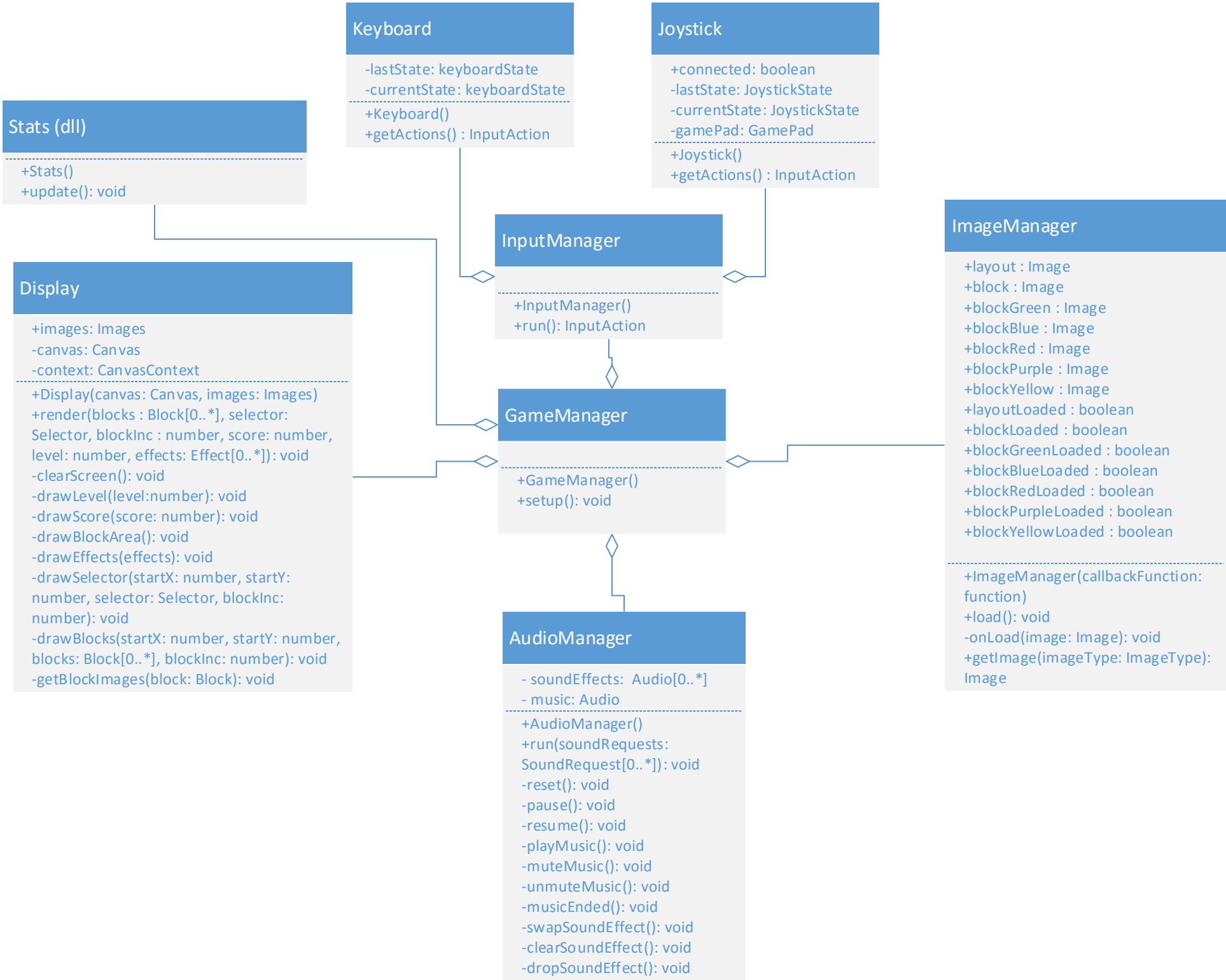
KeyboardState
<div>+A: KeyboardState</div> <div>+D: KeyboardState</div> <div>+F: KeyboardState</div> <div>+R: KeyboardState</div> <div>+S: KeyboardState</div> <div>+W: KeyboardState</div> <div>+Space: KeyboardState</div> <div>+Up: KeyboardState</div> <div>+Down: KeyboardState</div> <div>+Left: KeyboardState</div> <div>+Right: KeyboardState</div> <div>KeyboardState()</div>

ControllerState:  
The state of the keyboard at a given point in time.

Effect
<div>+tickStart:number</div> <div>+tickEnd:number</div> <div>+row:number</div> <div>+col:number</div> <div>+chain:number</div> <div>+set:number</div> <div>+Effect(tickStart:number, tickEnd:number, row:number, col:number, chain:number, set:number)</div>

Effect:  
When you get a combo of 4 or more and/or , or a chain an effect holds that data. it goes away after its tickEnd. Primary purpose is for display to render the effect

# View



# Controller

GameController

+setup(): void  
+end(): void  
+tick(): void

```
tick(){  
  *var Inputs = GameManger.InputManger.GetInputs()  
  *Use Inputs to run public functions on game  
  *Game.Tick()  
  *GameManger.AudioManger(Game.SoundRequests)  
  *GameManger.Display(Game.Data)  
}
```



# Model

Note: Has no outside Access

