

App
<u>+ CELLSIZE: int = 32 {READONLY}</u> <u>+ CELLHEIGHT: int = 32 {READONLY}</u> <u>+ TOPBAR: int = 64 {READONLY}</u> <u>+ WIDTH: int = 576</u> <u>+ HEIGHT: int = 640</u> <u>+ FPS: int = 60 {READONLY}</u> + configPath: String + config: JSONObject <u>+ sprite: HashMap&lt;String, PImage&gt;</u> + levels: ArrayList<Level> - levelConfigs: JSONArray + currentLevel: Level + currentLevelIndex: int <u>- score: float</u> - gameOver: boolean
+ App() <u>+ getSprite(name: String): PImage</u> + settings(): void + setup(): void + loadLevels(): void + loadSprites(): void + loadImageFromPath(filename: String): PImage <u>+ getColorCode(color: String): int</u> <u>+ addScore(amount: float): void</u> + keyPressed(event: KeyEvent): void + mousePressed(e: MouseEvent): void + mouseDragged(e: MouseEvent): void + mouseReleased(e: MouseEvent): void + draw(): void + drawGameOver(): void + drawScore(): void <u>+ main(args: String[]): void</u>

Cell
- isHole: boolean - type: String - type: String - sprite: PImage - x: int - y: int - preAnimSprite: PImage - hits: int
<u>+ Cell(type: String, x: int, y: int)</u> + setOldWall(): void + setYellowWall(): void + clamp(a: float, b: float, c: float): float + handleCollision(ball: Ball, neighbors: boolean[]): boolean + getColor(): int

Line
<u>- points: ArrayList&lt;Vec2&gt; {READONLY}</u>
+ Line(start: Vec2) + addPoint(point Vec2): void + handleCollision(ball: Ball): boolean + checkForCollision(point: Vec2, radius: int): Vec2[] + draw(window: PApplet): void

Level	Vec2			
<div>+ timeLeft: int</div> <div>- timerLast: long</div> <div>- layoutFilePath: String {READONLY}</div> <div>- spawnInterval: int {READONLY}</div> <div>- lastSpawnTime: long</div> <div>- increaseModifier: double {READONLY}</div> <div>- decreaseModifier: double {READONLY}</div> <div>- nextBallSpawnLastMeasuredTimeTill: float</div> <div>+ paused: boolean</div> <div>pausedTimeDiff: long</div> <div>- justUnpaused: boolean</div> <div>- balls: ArrayList&lt;Ball&gt; {READONLY}</div> <div>- spawnerLocs: ArrayList&lt;int[]&gt; {READONLY}</div> <div><u>- holeLocs: ArrayList&lt;Vec2&gt; {READONLY}</u></div> <div>- lines: ArrayList&lt;Line&gt; {READONLY}</div> <div>- cells: Cell[][]</div> <div>+ currentScore: float</div> <div>- scoreIncrease: double[] {READONLY}</div> <div>- scoreDecrease: double[] {READONLY}</div> <div>- scoreDecrease: double[] {READONLY}</div> <div><u>- generalScoreIncrease: double[] {READONLY}</u></div> <div><u>- generalScoreDecrease: double[] {READONLY}</u></div> <div>- currentLine: Line</div> <div>+ inEndAnim: boolean</div> <div>- framesSinceLastScoreAdd: int</div> <div>- currentYellowCells: Vec2[]</div> <div>+ levelLost: boolean</div>	<div><u>+ x: float</u></div> <div><u>+ y: float</u></div>			
	<div>+ Vec2(x: float, y: float)</div> <div>+ copy(): Vec2</div> <div>+ coordsToPos(): Vec2</div> <div>+ posToCoords(): Vec2</div> <div>+ to(v: Vec2): Vec2</div> <div>+ centerCoords(width: float, height: float): Vec2</div> <div>+ centerCoords(length: float): Vec2</div> <div>+ distanceTo(v: Vec2): double</div> <div>+ magnitude(): double</div> <div>+ add(v: Vec2): Vec2</div> <div>+ getUnitVec(): Vec2</div> <div>+ dot(v: Vec2): float</div> <div>+ distanceTo(x: float, y: float): double</div>			
	<table><tr><th>Ball</th></tr><tr><td><div>- sprite: PImage</div><div>+ color: int</div><div>- hasSpawned: boolean</div><div><u>- pos: Vec2</u></div><div>+ dx: float</div><div>+ dy: float</div><div>+ dy: float</div><div>+ spriteScaleFactor: float</div><div><u>+ radius: float = 12 {READONLY}</u></div></td></tr><tr><td><div>+ Ball(colorcode: int)</div><div>+ getSprite(): PImage</div><div>+ getPosVec(): Vec2</div><div>+ spawn(): void</div><div>+ hasSpawned(): boolean</div><div>+ setVel(newVel: Vec2): void</div><div>+ bounceX(): void</div><div>+ bounceY(): void</div><div>+ getVelVec(): Vec2</div><div>+ setInitPos(x: int, y: int): void</div><div>+ setSprite(sprite: PImage): void</div><div>+ setSprite(spriteName: String): void</div><div>- setInitVelocity(): void</div><div>+ draw(window: PApplet): void</div></td></tr></table>	Ball	<div>- sprite: PImage</div> <div>+ color: int</div> <div>- hasSpawned: boolean</div> <div><u>- pos: Vec2</u></div> <div>+ dx: float</div> <div>+ dy: float</div> <div>+ dy: float</div> <div>+ spriteScaleFactor: float</div> <div><u>+ radius: float = 12 {READONLY}</u></div>	<div>+ Ball(colorcode: int)</div> <div>+ getSprite(): PImage</div> <div>+ getPosVec(): Vec2</div> <div>+ spawn(): void</div> <div>+ hasSpawned(): boolean</div> <div>+ setVel(newVel: Vec2): void</div> <div>+ bounceX(): void</div> <div>+ bounceY(): void</div> <div>+ getVelVec(): Vec2</div> <div>+ setInitPos(x: int, y: int): void</div> <div>+ setSprite(sprite: PImage): void</div> <div>+ setSprite(spriteName: String): void</div> <div>- setInitVelocity(): void</div> <div>+ draw(window: PApplet): void</div>
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<div>+ Level(config: JSONObject)</div> <div>+ timerEmpty(): boolean</div> <div>+ startLevelEndAnim(): void</div> <div>+ setup(): void</div> <div>+ togglePause(): void</div> <div>+ addLineMouse(x: int, y: int): void</div> <div>+ addCurrentLinePoint(x: int, y: int)</div> <div>+ removeCurrentLinePoint(x: int, y: int): void</div> <div>+ removeCurrentLine(): void</div> <div>+ trySpawnNext(time: long): void</div> <div>+ levelOver(): boolean</div> <div>+ rotateYellowCells(): void</div> <div>+ handleEndAnimation(): void</div> <div>+ drawTimeUp(window: PApplet): void</div> <div>+ drawNextBalls(window PApplet): void</div> <div>+ handleTimer(time: long): void</div>				

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+ drawText(window: PApplet): void
+ drawLines(window PApplet): void
+ handleLinesCollision(ball: Ball): void
+ drawBalls(window PApplet): void
+ addScore(adjustment: float): void
+ handleHole(ball: Ball): Vec2
+ getNeighborsArr(x: int, y: int): boolean[]
+ drawCells(window: PApplet): void
+ setCells(): void
+ setBallInit(colorCode: char, x: int, y: int): void
+ adjustScoreAmounts(): void
+ setScoreAmounts(increase: JSONObject, decrease: JSONObject): void
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