UML Class Diagram

GamePanel Attributes private long serialVersionUID = 1L private Thread thread private boolean running = false private int FPS = 60 private long targetTime = 1000 / FPS public int TILESIZE = 32 public int TILESACROSS = 17 public int TILESDOWN = 21 public int SCALE = 1 public int WIDTH = TILESIZE * TILESACROSS public int HEIGHT = TILESIZE * TILESDOWN private BufferedImage image private int pixels[0..*] private Graphics2D g private Graphics gScreen private boolean paused private JFrame frame public int toDraw = 0 private int drawHeight = 608 Operations public GamePanel(JFrame frame) public void start() public void resume() public void stop() public void addNotify() public void keyPressed(KeyEvent key) public void keyReleased(KeyEvent key) public void keyTyped(KeyEvent arg0) public void run() private void update() private void draw() private void render() public void setDraw(int height) private void drawToScreen() private void initialize() public void mouseClicked(MouseEvent arg0) public void mouseEntered(MouseEvent m) public void mouseExited(MouseEvent m) public void mousePressed(MouseEvent m) public void mouseReleased(MouseEvent m)

Attributes private Logger logger = Logger.getLogger("Logging") private FileHandler debugFileHandler private FileHandler exceptionFileHandler Operations public Logging() public void debug(Level level, String msg) public void debug(Throwable exception, String msg)



```
🗏 Samurai
                                             Attributes
private int activeTile
private int xRotID
private int yRotID
public int samuraiType
private boolean shouldMove = false
protected boolean horzMove = false
protected int xDir = 0
protected boolean rotRight = false
protected boolean rotLeft = false
public boolean drop
public boolean changeSpeed
public int speedToChange
                                             Operations
public Samurai( SpriteSheet spriteSheet, int x, int y, Grid grid, int id, int xRotID, int yRotID, int type )
public int getType()
public int getXRotID()
public int getYRotID()
public void setXRotID(int xID)
public void setYRotID(int yID)
public void setHorzMove(boolean horz)
public void setRotRight( boolean right )
public void setRotLeft( boolean left )
public void setXDir(int xDir)
public void resetRotRightIDs()
public void swapRotDirToLeft()
public void swapRotDirToRight()
public void resetRotLeftIDs()
public void lockInGrid( )
protected void move()
public void setDrop(boolean drop)
public void setChangeSpeed(boolean change, int speedToChange)
                                  Operations Redefined From Entity
public void initialize( )
public void update()
                                                               grið
                                                               🔲 Grid
                                                               Attributes
                                     public int bottomBound
                                     public int leftBound
                                     public int rightBound
                                     public Point gridCoordinates[0..*,0..*]
                                     package int tilesAcross
                                     package int tilesDown
                                     public int lastFormation = 0
                                     public boolean deleteGrid = false
                                     public int rowsToDelete[0..*]
```

Operations
public Grid(int tileSize, int tilesAcross, int tilesDown)

public void setCurrentFormation(Formation form)
public Formation getCurrentFormation()

public void clearWholeGrid()
public void initializeGridCoordinates()
public void setLastFormation(int lastForm)

public int getLastFormation()

```
public Entity[0..*,0..*] getEntityGrid( )
                            public void removeFromGrid( Entity entity, int row, int col )
                            public void addToGrid( Entity entity, int row, int col )
                            public void forceAddToGrid( Entity en, int row, int col )
                            public boolean isRowFull(int row)
                            public void clearLocation(int row, int col)
                            public void setDeleteGrid( boolean set )
                            public void setRowsToDelete(int rows[0..*])
                            public boolean getDeleteGrid()
                            public int[0..*] getRowsToDelete( )
                            public boolean canMove(Entity entity, int xDir, int yDir)
                            public boolean canMoveHorz( Entity entity, int xDir, int yDir)
                            protected void updateEntity(Entity entity)
                       سينهير.0, entityGrid
                  Entity
protected int[] animations[0..*]
protected long loopTime
                                                          currentFormation
protected long elapsedTime
protected boolean isActive
                                                                   Formation
                                                                      Attributes
                                                      public boolean pieceActive
                                                      protected int highestY
                                                                      Operations
                   Operations
                                                      public void disableAll()
                                                      public void setPieceActive(boolean set)
protected void initialize()
                                                      public boolean getPieceActive( )
                                                      public void changeXLocation(int xDir)
                                                      public void rotateRight()
                                                      public void rotateLeft( )
public void setActive(boolean active)
                                                      public void lockInAll()
public boolean checkActive()
protected int getSpeed()
public void setSpeed(int speed)
protected void addAnimationTiles( int tile[0..*])
protected int[0..*] returnTile(int index)
```

protected int startingX protected int startingY protected int currentX protected int currentY public int id

protected int speed

protected boolean drop

protected int gridRow

protected int gridCol

public int getID()

public void update()

public int getRow()

public void setX(int x) public void setY(int y) public int getX() public int getY()

public int[0..*] returnActiveTile() public void switchActiveTile()

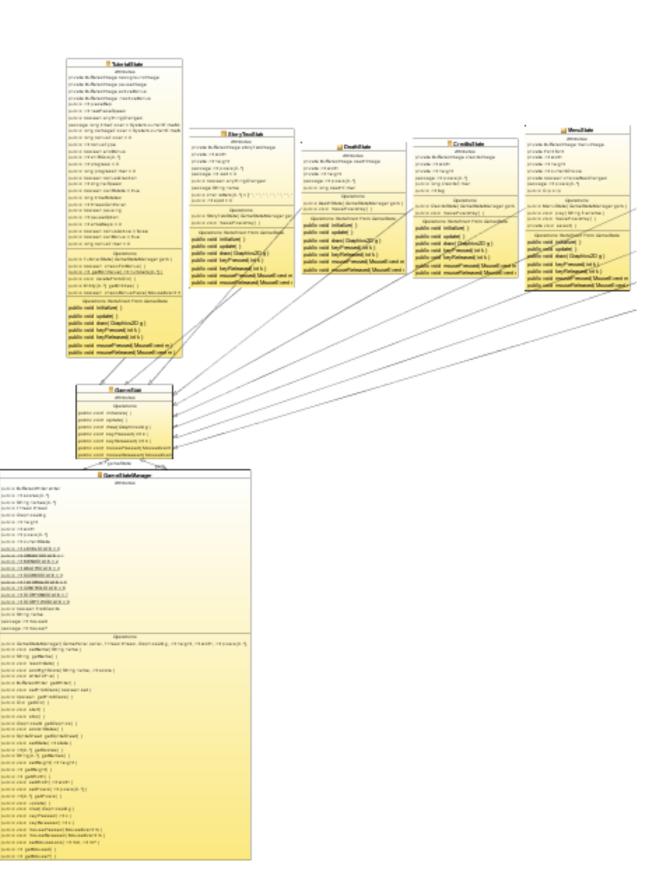
public int getCol()

public int activeTile = 0

Attributes public int mapWidth public int mapHeight public int width private BufferedImage backgroundImage private int pixels[0..*] Operations public Screen(int width, int height, SpriteSheet sheet) public void setEntities(Entity entities[0..*]) public void loadBackground(String backgroundPath) public BufferedImage getImage() public int[0..*] render() public boolean isAlpha(int color)

spriteSheet

```
SpriteSheet
                             Attributes
public String path
public int width
public int height
public int spriteSheetPixels[0..*]
public int spriteSheetPixels2D[0..*,0..*] = new int[32 * 16][32 * 16]
public int tileSize = 32
public int[] basicSamuraiTiles[0..*]
public int[] medSamuraiTiles[0..*]
public int[] advSamuraiTiles[0..*]
public int[] strongSamuraiTiles[0..*]
                             Operations
public SpriteSheet( String path )
public void make2DArray()
public int[0..*] loadSprite(int xTile, int yTile)
public void loadEntities()
public int[][0..*] getBasicSamTiles( )
public int[][0..*] getMedSamTiles( )
public int[][0..*] getAdvSamTiles()
public int[][0..*] getStrongSamTiles( )
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