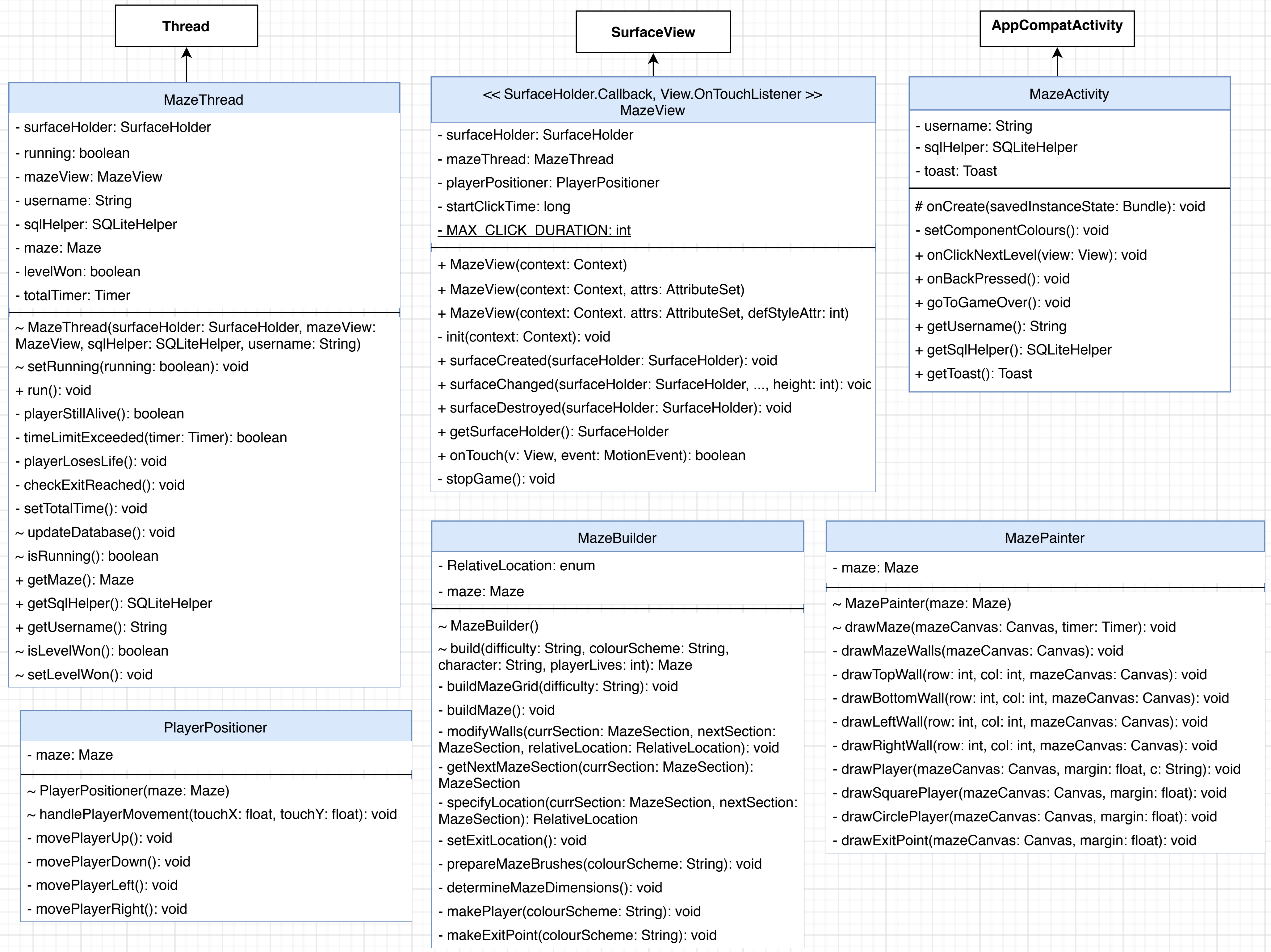

```
MazeThread
- surfaceHolder: SurfaceHolder
- running: boolean
- mazeView: MazeView
- username: String
- sqlHelper: SQLiteHelper
- maze: Maze
- levelWon: boolean
- totalTimer: Timer
----------------------------------------
~ MazeThread(surfaceHolder: SurfaceHolder, mazeView:
MazeView, sqlHelper: SQLiteHelper, username: String)
~ setRunning(running: boolean): void
+ run(): void
- playerStillAlive(): boolean
- timeLimitExceeded(timer: Timer): boolean
- playerLosesLife(): void
- checkExitReached(): void
- setTotalTime(): void
~ updateDatabase(): void
~ isRunning(): boolean
+ getMaze(): Maze
+ getSqlHelper(): SQLiteHelper
+ getUsername(): String
~ isLevelWon(): boolean
~ setLevelWon(): void
```

```
<< SurfaceHolder.Callback, View.OnTouchListener >>
MazeView
- surfaceHolder: SurfaceHolder
- mazeThread: MazeThread
- playerPositioner: PlayerPositioner
- startClickTime: long
- MAX_CLICK_DURATION: int
----------------------------------------
+ MazeView(context: Context)
+ MazeView(context: Context, attrs: AttributeSet)
+ MazeView(context: Context. attrs: AttributeSet, defStyleAttr: int)
- init(context: Context): void
+ surfaceCreated(surfaceHolder: SurfaceHolder): void
+ surfaceChanged(surfaceHolder: SurfaceHolder, ..., height: int): voic
+ surfaceDestroyed(surfaceHolder: SurfaceHolder): void
+ getSurfaceHolder(): SurfaceHolder
+ onTouch(v: View, event: MotionEvent): boolean
- stopGame(): void
```

```
MazeActivity
- username: String
- sqlHelper: SQLiteHelper
- toast: Toast
----------------------------------------
# onCreate(savedInstanceState: Bundle): void
- setComponentColours(): void
+ onClickNextLevel(view: View): void
+ onBackPressed(): void
+ goToGameOver(): void
+ getUsername(): String
+ getSqlHelper(): SQLiteHelper
+ getToast(): Toast
```

```
MazeBuilder
- RelativeLocation: enum
- maze: Maze
----------------------------------------
~ MazeBuilder()
~ build(difficulty: String, colourScheme: String,
character: String, playerLives: int): Maze
- buildMazeGrid(difficulty: String): void
- buildMaze(): void
- modifyWalls(currSection: MazeSection, nextSection:
MazeSection, relativeLocation: RelativeLocation): void
- getNextMazeSection(currSection: MazeSection):
MazeSection
- specifyLocation(currSection: MazeSection, nextSection:
MazeSection): RelativeLocation
- setExitLocation(): void
- prepareMazeBrushes(colourScheme: String): void
- determineMazeDimensions(): void
- makePlayer(colourScheme: String): void
- makeExitPoint(colourScheme: String): void
```

```
MazePainter
- maze: Maze
----------------------------------------
~ MazePainter(maze: Maze)
~ drawMaze(mazeCanvas: Canvas, timer: Timer): void
- drawMazeWalls(mazeCanvas: Canvas): void
- drawTopWall(row: int, col: int, mazeCanvas: Canvas): void
- drawBottomWall(row: int, col: int, mazeCanvas: Canvas): void
- drawLeftWall(row: int, col: int, mazeCanvas: Canvas): void
- drawRightWall(row: int, col: int, mazeCanvas: Canvas): void
- drawPlayer(mazeCanvas: Canvas, margin: float, c: String): void
- drawSquarePlayer(mazeCanvas: Canvas, margin: float): void
- drawCirclePlayer(mazeCanvas: Canvas, margin: float): void
- drawExitPoint(mazeCanvas: Canvas, margin: float): void
```

```
PlayerPositioner
- maze: Maze
----------------------------------------
~ PlayerPositioner(maze: Maze)
~ handlePlayerMovement(touchX: float, touchY: float): void
- movePlayerUp(): void
- movePlayerDown(): void
- movePlayerLeft(): void
- movePlayerRight(): void
```