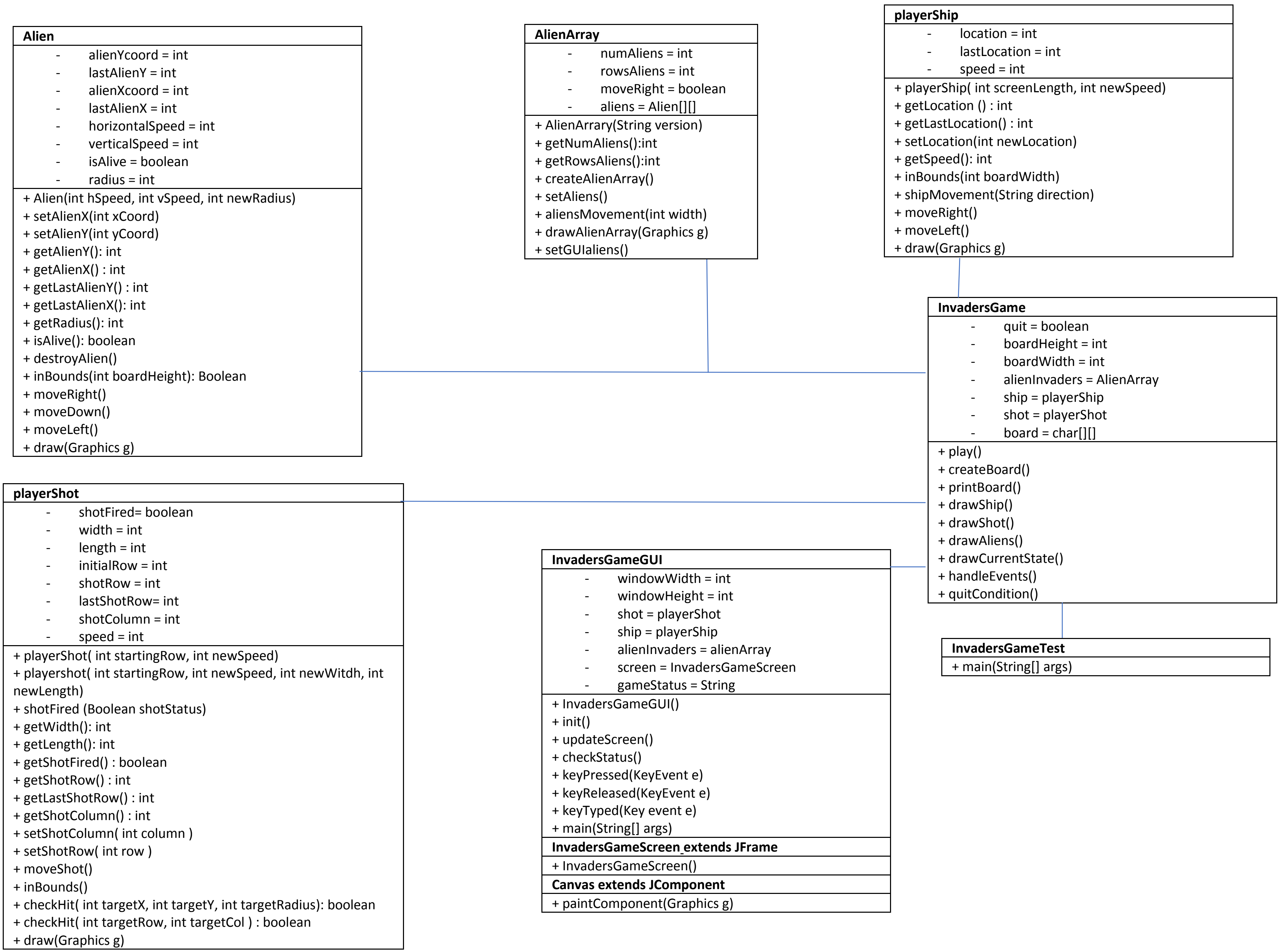

Alien

- alienYcoord = int
- lastAlienY = int
- alienXcoord = int
- lastAlienX = int
- horizontalSpeed = int
- verticalSpeed = int
- isAlive = boolean
- radius = int

+ Alien(int hSpeed, int vSpeed, int newRadius)
+ setAlienX(int xCoord)
+ setAlienY(int yCoord)
+ getAlienY(): int
+ getAlienX() : int
+ getLastAlienY() : int
+ getLastAlienX(): int
+ getRadius(): int
+ isAlive(): boolean
+ destroyAlien()
+ inBounds(int boardHeight): Boolean
+ moveRight()
+ moveDown()
+ moveLeft()
+ draw(Graphics g)

AlienArray

- numAliens = int
- rowsAliens = int
- moveRight = boolean
- aliens = Alien[][]

+ AlienArrary(String version)
+ getNumAliens():int
+ getRowsAliens():int
+ createAlienArray()
+ setAliens()
+ aliensMovement(int width)
+ drawAlienArray(Graphics g)
+ setGUIaliens()

playerShip

- location = int
- lastLocation = int
- speed = int

+ playerShip(int screenLength, int newSpeed)
+ getLocation () : int
+ getLastLocation() : int
+ setLocation(int newLocation)
+ getSpeed(): int
+ inBounds(int boardWidth)
+ shipMovement(String direction)
+ moveRight()
+ moveLeft()
+ draw(Graphics g)

InvadersGame

- quit = boolean
- boardHeight = int
- boardWidth = int
- alienInvaders = AlienArray
- ship = playerShip
- shot = playerShot
- board = char[][]

+ play()
+ createBoard()
+ printBoard()
+ drawShip()
+ drawShot()
+ drawAliens()
+ drawCurrentState()
+ handleEvents()
+ quitCondition()

playerShot

- shotFired= boolean
- width = int
- length = int
- initialRow = int
- shotRow = int
- lastShotRow= int
- shotColumn = int
- speed = int

+ playerShot(int startingRow, int newSpeed)
+ playershot(int startingRow, int newSpeed, int newWitdh, int newLength)
+ shotFired (Boolean shotStatus)
+ getWidth(): int
+ getLength(): int
+ getShotFired() : boolean
+ getShotRow() : int
+ getLastShotRow() : int
+ getShotColumn() : int
+ setShotColumn(int column)
+ setShotRow(int row)
+ moveShot()
+ inBounds()
+ checkHit(int targetX, int targetY, int targetRadius): boolean
+ checkHit(int targetRow, int targetCol) : boolean
+ draw(Graphics g)

InvadersGameGUI

- windowWidth = int
- windowHeight = int
- shot = playerShot
- ship = playerShip
- alienInvaders = alienArray
- screen = InvadersGameScreen
- gameStatus = String

+ InvadersGameGUI()
+ init()
+ updateScreen()
+ checkStatus()
+ keyPressed(KeyEvent e)
+ keyReleased(KeyEvent e)
+ keyTyped(Key event e)
+ main(String[] args)

InvadersGameScreen extends JFrame

+ InvadersGameScreen()

Canvas extends JComponent

+ paintComponent(Graphics g)

InvadersGameTest

+ main(String[] args)