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| **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) |

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| **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) |

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| **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() |

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| **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) |

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| **InvadersGame** |
| * quit = boolean * boardHeight = int * boardWidth = int * alienInvaders = AlienArray * ship = playerShip * shot = playerShot * board = char[][] |
| + play()  + createBoard()  + printBoard()  + drawShip()  + drawShot()  + drawAliens()  + drawCurrentState()  + handleEvents()  + quitCondition() |

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| **InvadersGameTest** |
| + main(String[] args) |

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| **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) |