**Class Diagram**

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| **Alien** |
| * alienYcoord = int * lastAlienY = int * alienXcoord = int * lastAlienX = int * horizontalSpeed = int * verticalSpeed = int * isAlive = boolean |
| + setAlienX(int xCoord)  + setAlienY(int yCoord)  + getAlienY(): int  + getAlienX() : int  + getLastAlienY() : int  + getLastAlienX(): int  + isAlive(): boolean  + destroyAlien()  + inBounds(int boardHeight): Boolean  + moveRight(int boardWidth)  + moveLeft(int boardWidth) |

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| **playerShip** |
| * Location = int * lastLocation = int * speed = int |
| + getLocation () : int  + getLastLocation() : int  + setLocation(int newLocation)  + getSpeed(): int  + inBounds(int boardWidth)  + shipMovement(String direction) |

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| **InvadersGame** |
| * ship = playerShip() * shot = playerShot() * alien1 = Alien() * alien2= Alien() * quit = Boolean * boardHeight = int * boardWidth = int * board = char[][] |
| + play()  + createBoard()  + drawCurrentState()  + handleEvents() |

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| **playerShot** |
| * shotFired= boolean * shotRow = int * lastShotRow= int * shotColumn = int * speed = int |
| + shotFired (Boolean shotStatus)  + getShotFired() : boolean  + getShotRow() : int  + getLastShotRow() : int  + getShotColumn() : int  + setShotColumn( int column )  + setShotRow( int row )  + moveShot()  + inBounds()  + checkHit( int targetRow, int targetCol ) : boolean |

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