READ ME:
Name: Omer Havakook ID: 203345087

INTERFACES AND CLASSES IN THE CODE:

Alien: I created this class that exstends from Block.
The "Alien" object should have the ability to move.
Methods - the methods of Block +
Move By – a method that moves the alien by movement.
Draw On – new method to draw an image.

AlienGroup: this class is a sprite, this method is in charge of the "matrix" movement. this class has the ability to arrange the list of Alien in Matrix.
Methods- the sprite methods.
findLastInList– find the last alien in matrix.
createMatrix – create the matrix.
updateMatrix – this method handle with a deletions in the Matrix.
shoot – this method is responsible of the Alien's shooting.
resetMatrix – this method set the Aliens at the start location.
findMaxX – to find the maximum x coordinated after the movement.
findMinX – to find the minimum x coordinate after the movement.
touchTheSheild - to check if the aliens touches the shield.

SpaceInvadersLevel: a class that implements LevelInformation. This method creates and set the elements for a level. This object is being created in gameFlow for each level – but with different speed.
Methods: this class has the methods of LevelInformation.

IMPLEMENTATION:

The Aliens formation:
In the class of AlienGroup I use the list of aliens and arrange them in matrix .In order to move the aliens I check if the right and left aliens can move. In case of deletion I update the matrix.

Shoot by Alien: I handle the creation of shooting inside the doOneFrame in GameLevel – I send the game to AlienGroup and there I created the shoots. I check the time of the shooting and the current time – if the difference between them is 0.35 seconds I called the shot method again.

Shots by player: I send the game to Paddle – in timePassed I check the time as I check for the shooting from the aliens. I called the shoot method and created a ball and shoot it from the paddle.