Readme file - bashare4, 308576933.

- The list of interfaces and classes in my code, and for each one a description of its purpose and responsibilities.
    - ❖ HitNotifier (interface) – a class that implements that need to notify all its listeners that it was being hit.
    - ❖ HitListener (interface) – trackers for the hits, each hit listener listens only to its hit notifier.
    - ❖ EnemyRemover – implements HitListener and it is listener of Enemy types, each time an Enemy is being hit, the EnemyRemover "hears" that and removes that enemy from the game.
    - ❖ Enemy – class for the aliens (or any other…), implements Sprite, Collidable, HitNotifier, can move and shoot fire.
    - ❖ EnemyCollection – implements HitListener to know which enemy in the formation was being hit and Sprite to move the whole formation.
    - ❖ Spaceship – wraps the "paddle" just for design.
    - ❖ PaddleTracking – HitListener of the paddle, when the paddle is being hit it is decreasing the number of paddles from 1 to 0 and that's mean the player lost 1 life and the game starts again (the formation goes back to the original location and speed but the shields are the same as they were before the hit.)
    - ❖ Fire – implements Sprite, was almost like the Ball from the last game but it has only dy option in velocity, is drawn as a circle, the size and color depends on the one who sets new Fire.
    - ❖ FireOnScreenCollection – every time a new fire is being shot, it adds to the fire collection, it is important so when the one turn is finished we want all of them to disappear and so we will be able to remove them at endOneTurn method.
    - ❖ LevelInformation (interface) – holds the information to each level.
- A brief description of how I implemented the following: (a) the Aliens formation; (b) the shields; (c) shots by aliens; (d) shots by player.

(a) The Aliens formation – I implemented it with a new class called "EnemyCollection". The class creates a list of 50 enemies (instance of Enemy class), and gives each one of them different location in the formation. The collection has methods like moveOneStep, drawOn, addHitListener , addToGame etc. that each Enemy in the collection has and the collection iterates the list and do it in each ememy. The collection is also a hit listener so when one of the collection is being hit the formation knows exactly who to remove from the list. The collection has members for the left x and right x boundaries that it gets every move one step from the list. It also has a method the know which is the lowest y of the shields (if there are no shields the aliens will go down until they reach the paddle.).

(b) The shields – I made a new class for shields that gets an upper left point for the big block, and then it makes it from many small blocks. The shield can also get a color.

(c) Shots by aliens – in the EnemyCollection I have methods that helped me get a list of the lowest enemies (one in each column), then I randomize one number bounded by the size of that list and returns one Enemy which has a method called "fire". During the game, I have a method that checks if 0.5 second passed before the next shoot.

(d) Shots by player – I added the paddle a method called fire that ass a new Fire instance to the game, the fire goes out of the center of the paddle. During the game, I saved the player's last shot and then before he shoots a new fire I checked if 0.35

second passed, if it didn’t the player won't be able to shoot. (shooting with space key.)