

## Excercise 2

Each class we split into several subclasses will have one single responsibility.

Game:

### Controller

Controller: this interface class will provide template for the Controller classes of different game elements.

- UnitController: this abstract class has the responsibility of controlling the non moving units in the game
  - ExplosionController: this class is responsible for modifying the explosions in the game.
  - BarricadeController: this class is responsible for modifying the barricades in the game.
  - MovingUnitController: this abstract class is a class that has the responsibility of controlling the moving units in the game.
    - \* AlienController: this class has the responsibility of modifying the aliens in the game.
    - \* SpaceShipController: this class is responsible for modifying the spaceship.
    - \* BulletController: this class is responsible for modifying the bullets in the game.
      - AlienBulletController this class is responsible for modifying the alienbullets in the game.
      - SpaceShipBulletController this class is responsible for modifying th space-shipbullets in the game.

### Unit

We also want to change the Unit section of our code, only by making an difference between a moving unit and a non moving unit:

- MovingUnit: abstract class responsible for the moving units.
  - Alien: class responsible for the aliens.
  - SpaceShip: class responsible for hthe spaceships.
  - Bullet: abstract class responsible for the bullets.
    - \* SpaceShipBullet: class responsible for the bullets shot by the spaceship.
    - \* AlienBullet: class responsible for the bullets shot by the aliens.
- Explosion: class responsible for the explosions.
- Barricade: class responsible for the barricades.

## GameUiController

Draw:

- UiElement: this (abstract) class is responsible for drawing all the ui parts on the screen.
  - UiElementUnit: this abstract class is responsible for the units on the screen.
    - \* UiElementAlien: this class is responsible for drawing the aliens on the screen.
    - \* UiElementSpaceShip: this class is responsible for drawing the spaceship on the screen.
    - \* UiElementBarricade: this class is responsible for drawing the barricades on the screen.
    - \* UiElementExplosion: this class is responsible for drawing the explosions on the screen.
    - \* UiElementBullet: this abstract class is responsible for drawing the bullets on the screen.
      - UiElementSpaceShipBullet: this class is responsible for drawing the SpaceShipBullets on the screen.
      - UiElementShipBullet: this class is responsible for drawing the SpaceShipBullets on the screen.
- DrawScore: this class is responsible the score on the screen.
- DrawLives: this class is responsible the lives on the screen.