Excercise 1

To improve our code, we want to split several classes into more classes. The classes we want to split are Game and GameUIController, because these classes are now too big in our code. We have chosen to split these classes in the following classes:
Game:

Controller

- UnitController

  - ExplosionController
  - BarricadeController
  - MovingUnitController

    * AlienController
    * SpaceShipController
    * BulletController
      · AlienBulletController
      · SpaceShipBulletController

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

  - Alien
  - SpaceShip
  - Bullet

    * SpaceShipBullet
    * AlienBullet

- Explosion

- Barricade

GameUiController

Changing the structure of unit in our code we also need to change the ui section. This will be the new class hierarchy. GameUIController:

- UiElement

  - UiUnit
    * UiAlien
    * UiSpaceShip

- * UiBarricade
- * UiExplosion
- * UiBullet
  - · UiSpaceShipBullet
  - · UiAlienBullet
- − Score
- − Lives

Since we did implement equals methods in most of (the suitable) classes but we did not implement hash code yet. Hashcode should be implemented too.