

Exercise 1

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

Game:

- 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 the spaceshipbullets in the game.

GameUIController, draw:

- DrawUnit: this abstract class is responsible for drawing units on the screen.
 - DrawAlien: this class is responsible for drawing the aliens on the screen.
 - DrawSpaceShip: this class is responsible for drawing the spaceship on the screen.
 - DrawBarricade: this class is responsible for drawing the barricades on the screen.
 - DrawExplosion: this class is responsible for drawing the explosions on the screen.
 - DrawBullet: this class is responsible for drawing the bullets on the screen.
- DrawScore: this class is responsible for the score on the screen.
- DrawLives: this class is responsible for the lives on the screen.
- Unit: the main class of all units.
 - MovingUnit: the main class of all units that are moving.
 - * Alien: this class is the alien unit in the game.
 - * SpaceShip: this class is responsible for the spaceship unit.
 - * Bullet: this class is responsible for the bullet unit.
 - SpaceShipBullet: this class is responsible for the spaceshipbullet unit.

- AlienBullet: this class is responsible for the alienbullet unit.
- Explosion: this class is responsible for the explosion unit.
- Barricade: this class is responsible for the barricade unit.

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.