DOCUMENTATION

# IMPLEMENTATION

Received code before commencing add-ons:

1. The assignment implements a space ship that moves right and left + shoots. The first 3 lines of the config take the size, x position and instructions. The instructions are separated by “,”.
2. The Config has been implemented with a singleton design pattern. The Bullet has been implemented with a builder design pattern.
3. The extensions I have implemented have been: - According to the size of the ship, the game screen is adjusted and so is the starting y position. - When a bullet is shot, there is a laser beam noise made (with QSound).
4. The 4th additional line in the config file is the number of frames per second and can be modified for each individuals experience. - I have attempted to align the bullet being project from the middle of the ship, regardless of what size the ship is or starting x.
5. Base class is actually a “GameObj\_Setter” for a better naming convention without dwelling too much what is going on with it.

# EXTENTIONS

1. Following the previous singleton design I have extended the configuration file with 3 additional lines, the first is alienPos, that receives the position of a swarms of aliens separated by “,”. The second line is the Pattern of the aliens, that is in a format: Down,Right,Right,Down,Left,Left where “Down” is when the swarm go down in the screen. Finally the last line the shoot type of the swarm, that can to be random or same.
2. For the Alien Bullets I use the pattern Facade to adapt the previous interface named “BulletBuilderInterface”. The Facade is the class ***AlienBulletBuilder***, that is used by the ***AlienBullets***class.
3. For the Class ***Swarm***(that handle the swarms of aliens) I use the Flyweight Pattern, Storing the Aliens in a QList of QLists to handle them.