Diep.io Documentation

First of all I appreciate our professor Dr Zojaji and her teacher assistants Mr Soroush Zargar and Mr Alireza Omidi for their efforts in this term.

Diep.io is a game which contains a tank that shoots and a lot of objects that appear randomly. These objects are like enemies. They have negative points that when the tank hit with them it's health will decrease. But tank has the ability to shoot and by shooting bullets to these objects their health will decrease and after a while they will vanish from the game background.

Note that the health of each object will differ from each other, for instance objects are triangle , pentagon and square and for example square health is 5 and pentagon health is 3. It means that you have to shoot 3 times to destruct pentagon and 5 times to destruct square.

Don't forget that also our tank has health. While it strikes with objects its health will decrease.

By shooting bullets toward objects tank's score will increase.

Game over is happening when our tank health become 0.

To describe the procedures of programming:

1-including QgraphicsItems and Qobjects

(because all of objects that go into the scene are QgraphicsItem and all of functions and structures that use signals and slots are a child of Qobject)

2-we need a scene that contains game objects and a view to make the scene visible. Also there are lines of code which set the size and appearance of the scene and game view. (for e.g. calling these functions : setFixedsize, setsceneRect etc.)

3-creating class player which represents our tank including 3 member functions.

a) constructor: creating tank , set its picture , and creating a timer for collide function.

b) void KeyPressEvent: moving up, down , left and right. Also creating bullet and shooting toward objects.

c) collide : check if our tank collides with objects and then decrease it's health.

4-class bullet: it contains a constructor , move function that tests if it collides with shapes or not. If they collides with each other then we want to remove and then delete the items from the scene.

5-class Object: shapes like square, triangle and pentagon inherits from class object. All of them have different negative score and different health. When bullet collides with shapes

their healthes decrease and when it go to zero they will vanish from the scene. Also when the tank collides with these shapes its health will decrease.

6-class score & health: it is not just for our tank , it is also used for objects.

Score and health classes are the same.

Also these classes includes editors for example setting its font and so on.

7-class button: this class is for creating buttons including : start, restart and quit.

We connect a timer to clicked slot to create these buttons and their functions.

8-class game: this a general class that contains the base code of the game.

Written by: Sarah Ghanei

Sarah Ghanei

Mahdieh Khademian

Mohadeseh Heydari