# Shooting Game (Target Practice)

## Class descriptions-

### Level Class:

The Level class contains variables about the level. It is used by the program to determine the speed, size and difficulty of the level that the user is playing. The variables that the class contains are-

int levelNumber –

This variable determines the number of the level. The higher the number, the harder the level is.

int maxScore –

This variable contains the maximum score for this level. It is calculated based upon the difficulty and speed & size of the objects in the level.

int currScore –

This variable contains the current score of the player.

int numTargetsSmall –

This variable contains the number of small targets that are part of this level.

int numTargetsMedium –

This variable contains the number of medium sized targets that are part of this level.

int numTargetsBig –

This variable contains the number of big targets that are part of this level.

The Level class also contains a constructor that receives and sets the levelNumber, numTargetsSmall, numTargetsMedium and numTargetsBig.

An updateScore method is also part of the Level class. This method takes the amount to add to the currScore as its parameter and adds it to the currScore.

### Player class:

The player class contains variables necessary for the program to keep track of the current player. The variables that it contains are:

string name –

This variable contains the name of the player.

int totalscore –

This variable keeps track of the player’s total score.

int highscore –

This variable keeps track of the player’s high score.

This class also contains multiple methods. The first is a constructor that takes a string as a parameter and assigns it to the player name.

The second method is updateTotalScore which takes an integer as a parameter and adds it to the total score.

The third method is the updateHighScore method that takes an integer as a parameter and sets it as the new high score if it is greater than the current high score.

The remaining classes are getters and setters for the necessary variables.

### Target Class:

This class contains information about the targets that are presented on screen in each level. It contains a size variable that keeps track of the size of the object, a type variable that is a string that keeps track of the kind of object that it is and a life variable that contains a number that represents the amount of life the object has.

The constructor for this class takes a string as a parameter and assigns that to the ‘type’ variable. Based on the type variable, the size and the life of the target is determined and assigned to the appropriate variables.

A Shot method takes an integer as a parameter (this integer represents the hit amount from the weapon) and decrements the life of the target by that much.

A get method that returns the amount life remaining in the object.

### Weapon Class:

The weapon class contains the details about each weapon. It contains type, ammo, damage and timeReload. The type is the type of the weapon, the ammo is the number of bullets that it can fire in one go, the damage is the amount of damage that each shot from this weapon can do and the timeReload is the amount of time that the weapon takes to reload itself.

The constructor for this class takes the type of the weapon as a string, determines the ammo, damage and timeReload based upon that and assigns them to the appropriate variables.

The other methods in this class are TakenShot which is called each time a shot is taken from that weapon and decrements the amount of ammo by 1 and the Reload class which reloads the weapon ammo.

## Forms –











