## C# 2 Team "Horned Demon"

**Team members:**

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Game name: **“Towers”**

GitHub repository: [**https://github.com/VladimirDimov/Towers**](https://github.com/VladimirDimov/Towers)

**Project explanation:**

It’s a dynamic game for two players. Each player has a tower with one hundred life points. The aim is to destroy the other player’s tower by shooting at it. The game is written in one class and in a number of methods.

The three main modules of the game are: choosing the game options through the menu, drawing the terrain with the towers and realization of the shooting process.

**The menu** contains several options:

* New Game
* Change Player Names
* Build Map
* Build from file;
* Build random terrain
* How To Play
* Quit Game

**The ball movement** is performed by using the following parameters: shooting angle, shooting velocity and accounting for the wind. The ball trajectory is calculated through a quadratic equation using the above mentioned parameters.

When the ball hits an object on the terrain a method checks if the object is part of the terrain (‘#’) or a part of a tower ( ‘1’ or ‘2’ ). The ball destroys a square of 3x3 and for each part of the destroyed square that coincide with a tower 20 life points from the hit tower are taken.

Each player has a turn to shoot and then the next player shoots. The two players alternate with each other. The game continues until one of the two players has 0 life points. Then the winner has a match point and new game starts with both players having 100 life points.

**The building of the terrain** can be performed in two ways. The first is by using a text file which contains the terrain shape. The second way is by using a method which draws the terrain shape randomly. The terrain is first loaded in a two dimensional array and then through a StringBuider is written on the console. Then the towers are placed at 10 positions from both ends of the terrain and on the top of the terrain. Also a panel showing some game info is placed on the top of the console. The panel is refreshed each time when a game parameter has changed.