**Team “Charles Dickens”**

1. Stefan Mihaylov (hades12)
2. Georgi Yaramov (georgi.yaramov)
3. Plamen Bogdanov (plmb123)
4. Hinka Hineva (hinkah)

# Goals

The goal of the project is team work in Telerik academy, where some requirements of Object-oriented programming (example: 3 types of interface, 15 classes, 3 abstract classes etc.) should be met. We were free to choose the type of work. The project is to be presented in front of the Telerik Academy’s lecturers.

# Project Description

The game “Fighters” is a role play game, where our character – Superhero collides with some static objects like trees, houses and meets other movable objects like animals and characters – traders, villagers and warriors gaining different types of experience and powers. Our game is developed in C#.

The project satisfies the general requirements of the assignment completely:

• 7 types of interface (IRenderable, IRenderer, IUserInterface, ICollidable, IControllable, IMoveble, IWorldObject )

Required types of interface: 5, Different types of interface in app: 7

• 5 Abstract classes (WorldObject, StaticObject, MovableObject, Animal, Character)

Required abstract classes: 3, Abstract classes in app: 5

• 17 Classes (SuperHero, Warrior, Villager, Trader, Wolf, Monkey, Rabbit, Tree, House, Fence, Engine, ConsoleRenderer, CollisionDispatcher, KeyboardInterface, StartGame, Program, Menu)

Required classes: 15, Classes in app: 17

• 1 exception class (InvalidPowerValueException)

Required exception classes: 1, Exception classes in app: 1

• 3 levels of depth in inheritance

Required levels : 3, Levels in app: 4

• 1 Stucture (MatrixCoords)

Required structures: 1, Structure in app: 1

• 2 polymorphism usages (3 Lists of Static , Movable and World objects)

Required usages of polymorphisms: 1, Usage in app: 3

• 3 enumeration (DirectionType, BonusType, AnimalType)

Required enumerations : 1, Enumerations in app: 3

• Events (ExitGame)

Required events : 1, Events in app: 1

• design patterns (Composite, Iterator)

Required design patterns : 1, Patterns in app: 2

Source code repository link: <https://github.com/hinkah/CharlesDikensTeam/>

Class diagram

