# Telerik Academy

# Team work assignment, OOP

# Project documentation

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2. Team members.

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1. Project Purpose.

This is a Windows console version of the famous game “Sokoban”, using C# and OOP practices.

1. Implementation.

The project consists of: 4 interfaces; totally 31 classes including: 1 abstract class and 5 exception classes; 2 structures; 1 enumeration; 6 events; 1 Singleton design pattern.

The program uses a general abstract object class inherited by two classes – one for movable objects and another for static objects. These both classes are inherited by the classes of the game objects: player, box, target and wall. All the objects are coordinated by collision detection.

The program uses file loading (JSON parsing) for storing and loading maps (game levels). All the maps are loaded from a .txt file and have different properties like: object positions, time limit, size, difficulty, move limit and name.

The program uses a timer to countdown the action which gives additional experience to the player.

User controls are visible onscreen.

1. Usage.

The game loads a map (game level) with all objects (player, boxes, targets and walls) set. The player must finish the level (put all boxes over all targets, marked with “x”) in time before the timer reaches zero. If he succeeds a new map is loaded, if not – an end game screen appears and the current map is loaded again.

A restart button (key “R”) restarts the current level if the player reaches no more moves situation.

The game ends when all levels are completed successfully.

1. Class Diagram: included in project folder/Diagrams.
2. Project repository URL:

<http://sokobanoop.codeplex.com/SourceControl/changeset/view/24858>