Design Patterns and Software Development Process – Final Project – A Monopoly™ game

1. Introduction

*Objective of the project is to simulate a simplified version of the Monopoly™ game.*

The version of the Monopoly game that we have to program for this project is a simplified one. The rules of the game are the same of the basic game, however there is **no money** in this one. This means players cannot buy properties, and to leave the prison, they need to wait three rounds or roll doubles.

The board game is composed of 40 positions, like in the original game, players can occupy the same position and there are two dice to be rolled. Each player, one by one, rolls dice, moves forward according to the number from the dice (or not with the particularity of the jail) and the next player can then begin their turn.

The project is programmed in C#, as it is a good language for OOP.

1. Design Hypotheses

To program the Monopoly, we first have to define some design hypotheses.

In order to know where the players are on the board game, we need to keep their positions. We decided to link a player to their corresponding position and to keep the list of all players on a position. For the specificity of the jail, we have a list of players in Visit Only and a list for In Jail.

For the players in jail (not in Visit Only), we keep track of the number of turns after moving to jail, to know when they will have the right to leave.

At the beginning of the game, the list of the players is asked and the order for them to play. After each player turn, we go for the next player.