**Midterm project**

**Mastermind**

Mastermind is a code-breaking game for two players. One player becomes the codemaker (computer), the other is the codebreaker. The codemaker chooses a pattern of four (or more) colors. The codebreaker tries to guess the pattern, in both order and color, within eight to twelve turns. For each turn, the codemaker provides feedback: black color indicates that the guess is correct in both color and position, white color indicates the existence of a correct color placed in the wrong position.

The version of Mastermind that is implemented during this project is using numbers instead of color patterns and includes the following functionality: the player, will have the opportunity to participate in the game multiple times and see the statistics of all the attempts, as well as seeing the results and records of other players. The results of a game include the number of guesses, user score and whether the game was won or not. User best score is saved into a separate entity record, as well as the number of won games and lost games.

According to the structure of the project, the models are represented by the classes User, Game, Role, Score and UserInformation, which includes additional data about the player. All the models have their corresponding Services, Controllers and Views.

