The project was carried out as a team by Matteo Morabito and Andrea Scalenghe. In the code there was no division of labor since it was done together. Lines of code, ideas and errors were always discussed and seen together. We would not have known how to clearly divide the different contributions.

- **Problem Description**: We wanted to remodel a soccer league. The final idea is to be able to see the unfolding of a league, possibly being able to make some changes to the teams and players that composing it. You can create each player and each team to your liking (providing names, ratings, and economic availability for them). I players are also characterized by their physical condition (sick or healthy) and in each game they have a chance, with a percentage of randomness, that they may be injured. Player exchanges can be made between teams, obviously involving exchanges of money.

- **Class description**:
  - Player: Each player is characterized by his name, his rating, his physical status, and the number of games played consecutively. There are three methods that read not only the class objects and these are used to model then in the day method of the league class.

  - Team: Each team is characterized by its name, the roster of players that makes it up (a list of Players whose number is variable, as long as it is greater than 0) and the money it has. The non trivial are used to trade players.

  - League: Each league is characterized by the practicing teams (a map of Teams), the schedule (a map of days, where a day is a list of pairs of Teams), the standings (a vector of Team-score pairs) and the number of the day. The builder randomly constructs a calendar, based on the number of teams. The day method plays the matches of that day, via checks on team value and a partially random injury mechanism.

- **Intruction**: The program will ask you to enter a number for the see play two different types of leagues (one preset and one buildable) or see a trade between teams.

- **Output example:**
  Input: 1
  Output: ELENCO SQUADRE:
  SQUADRA NUMERO 1 :
  Juventus F.C.
  SQUADRA NUMERO 2 :
  AC Milan
  SQUADRA NUMERO 3 :
  Internazionale F.C.
  SQUADRA NUMERO 4 :
  Atalanta BC

  CALENDARIO:
  Giornata 1:
  AC Milan vs Juventus F.C.
  Internazionale F.C. vs Atalanta BC
  Giornata 2:
  AC Milan vs Atalanta BC
  Juventus F.C. vs Internazionale F.C.
  Giornata 3:
  AC Milan vs Internazionale F.C.
  Juventus F.C. vs Atalanta BC

  classifica alla giornata 1:
  L'attuale classifica e' la seguente
  1 AC Milan con punti: 1
  2 Atalanta BC con punti: 1
  3 Internazionale F.C. con punti: 1
  4 Juventus F.C. con punti: 1

  classifica alla giornata 2:
  L'attuale classifica e' la seguente
  1 AC Milan con punti: 2
  2 Atalanta BC con punti: 2
  3 Internazionale F.C. con punti: 2
  4 Juventus F.C. con punti: 2

  classifica alla giornata 3:
  L'attuale classifica e' la seguente
  1 AC Milan con punti: 3
  2 Atalanta BC con punti: 3
  3 Internazionale F.C. con punti: 3
  4 Juventus F.C. con punti: 3

- **N:**
  Non abbiamo usato riferimenti esterni.