

Programming Project / C++  
-= Table Tennis Tournament=-

Student 1: Groza Mario-Iustin

Student 2: Jurjonescu Emanuel

**I. Problem Statement**

Student 1 is responsible for managing the tournament:

- adding new match results with validation
- updating player statistics (wins/losses)
- saving matches to a file

Student 2 is responsible for interacting with the tournament system:

- viewing the ranking of players
- checking match history and individual player records
- resetting the tournament

**II. Data Structures Used by the Team**

The following classes will be used:

- Player: string name, int wins, int losses
- Match: string player1, string player2, int score1, int score2

**III. File Structure**

The following files will be used:

- matches.txt

A file that stores all played matches in the format:

<number\_of\_matches>

<player1> <score1> <player2> <score2>

- players.txt

A file that stores player statistics:

<number\_of\_players>

<name> <wins> <losses>

#### **IV. Interaction with Executables**

- App 1 will expose the following options:  
./app\_1.exe add\_match <player1> <score1> <player2> <score2>  
# Adds a match and updates player stats.  
  
./app\_1.exe match\_history  
# Displays all matches in chronological order.  
  
./app\_1.exe list\_players  
# Displays players and their win/loss stats.
- App 2 will expose the following options:  
./app\_2.exe show\_rankings  
# Displays players ranked by number of wins.  
  
./app\_2.exe show\_player <name>  
# Displays win/loss record and match history for a given player.  
  
./app\_2.exe reset  
# Clears all tournament data (matches and players).