

Sport Prediction System

Generated by Doxygen 1.9.1

1 Hierarchical Index	1
1.1 Class Hierarchy	1
2 Class Index	3
2.1 Class List	3
3 Class Documentation	5
3.1 CSVReader< M > Class Template Reference	5
3.1.1 Member Function Documentation	5
3.1.1.1 GetMatchDataFromCsvFile()	5
3.2 CSVWriter< M > Class Template Reference	6
3.3 EmailService Class Reference	6
3.3.1 Detailed Description	6
3.3.2 Constructor & Destructor Documentation	6
3.3.2.1 EmailService()	6
3.3.3 Member Function Documentation	7
3.3.3.1 SendEmail()	7
3.4 FootballMatch Class Reference	7
3.5 FootballPrediction Class Reference	8
3.6 Match Class Reference	8
3.6.1 Detailed Description	9
3.6.2 Constructor & Destructor Documentation	9
3.6.2.1 Match()	9
3.7 Prediction Class Reference	9
3.8 PredictionGame Class Reference	10
3.8.1 Detailed Description	10
3.8.2 Constructor & Destructor Documentation	10
3.8.2.1 PredictionGame()	10
3.8.3 Member Function Documentation	11
3.8.3.1 Register()	11
3.8.3.2 SendDailyEmail()	11
3.8.3.3 Unsubscribe()	11
3.8.4 Property Documentation	11
3.8.4.1 PredictionGameID	11
3.9 Schedule< T > Class Template Reference	11
3.9.1 Detailed Description	12
3.10 Score Class Reference	12

Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

CSVReader< M >	5
CSVWriter< M >	6
EmailService	6
Match	8
FootballMatch	7
Prediction	9
FootballPrediction	8
PredictionGame	10
Schedule< T >	11
Score	12

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

CSVReader< M >	5
CSVWriter< M >	6
EmailService	
Provides functionality to send emails using SMTP	6
FootballMatch	7
FootballPrediction	8
Match	
Abstract match class to set a frame for sport-specific kinds of matches	8
Prediction	9
PredictionGame	
Represents a prediction game in the Sport Prediction System (SPS)	10
Schedule< T >	
Generic class Schedule which represents a tournament	11
Score	12

Chapter 3

Class Documentation

3.1 CSVReader< M > Class Template Reference

Static Public Member Functions

- static string[] [GetMatchDataFromCsvFile](#) (string PathToMatchDataCsvFile, int line_number)
Reads the match data from a CSV file.
- static List< [Match](#) > **GetScheduleFromCsvFile** (string PathToCsvFile, SportsTypes sport_type)

3.1.1 Member Function Documentation

3.1.1.1 GetMatchDataFromCsvFile()

```
static string [] CSVReader< M >.GetMatchDataFromCsvFile (  
    string PathToMatchDataCsvFile,  
    int line_number ) [inline], [static]
```

Reads the match data from a CSV file.

Parameters

<i>PathToMatchDataCsvFile</i>	The path to the CSV file containing match data.
<i>MatchID</i>	The unique identifier of the match.

Returns

An array of strings containing the match data.

The documentation for this class was generated from the following file:

- src/ClassLib/CSVReader.cs

3.2 CSVWriter< M > Class Template Reference

Static Public Member Functions

- static void **UpdateSchedule** (string PathToCsvFile, List< [Match](#) > schedule)
- static void **DeleteScheduleFile** (string PathToCsvFile)

The documentation for this class was generated from the following file:

- src/ClassLib/CSVWriter.cs

3.3 EmailService Class Reference

Provides functionality to send emails using SMTP.

Public Member Functions

- [EmailService](#) (string smtpServer, int smtpPort, string username, string password)
Initializes a new instance of the [EmailService](#) class.
- void [SendEmail](#) (string recipient, string subject, string content)
Sends an email.

3.3.1 Detailed Description

Provides functionality to send emails using SMTP.

3.3.2 Constructor & Destructor Documentation

3.3.2.1 EmailService()

```
EmailService.EmailService (
    string smtpServer,
    int smtpPort,
    string username,
    string password ) [inline]
```

Initializes a new instance of the [EmailService](#) class.

Parameters

<i>smtpServer</i>	The SMTP server address.
<i>smtpPort</i>	The SMTP server port.
<i>username</i>	The username for SMTP authentication.
<i>password</i>	The password for SMTP authentication.

3.3.3 Member Function Documentation

3.3.3.1 SendEmail()

```
void EmailService.SendEmail (
    string recipient,
    string subject,
    string content ) [inline]
```

Sends an email.

Parameters

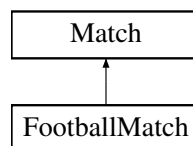
<i>recipient</i>	The recipient's email address.
<i>subject</i>	The subject of the email.
<i>content</i>	The content of the email.

The documentation for this class was generated from the following file:

- src/ClassLib/EmailService.cs

3.4 FootballMatch Class Reference

Inheritance diagram for FootballMatch:



Public Member Functions

- **FootballMatch** (string PathToMatchDataCsvFile, int line_number)
- override string **ToString** ()

Properties

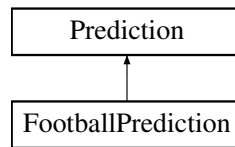
- string? **HomeTeam** [get]
- string? **AwayTeam** [get]
- byte? **ResultHomeTeamPenalties** [get]
- byte? **ResultAwayTeamPenalties** [get]

The documentation for this class was generated from the following file:

- src/ClassLib/FootballMatch.cs

3.5 FootballPrediction Class Reference

Inheritance diagram for FootballPrediction:



Public Member Functions

- **FootballPrediction** (uint MemberID, int MatchID, byte PredictionHome, byte PredictionAway)
- void **ChangePrediction** (uint? NewPredictionHome, uint? NewPredictionAway, uint PredictionID)

Additional Inherited Members

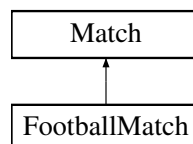
The documentation for this class was generated from the following file:

- src/ClassLib/FootballPrediction.cs

3.6 Match Class Reference

Abstract match class to set a frame for sport-specific kinds of matches.

Inheritance diagram for Match:



Public Member Functions

- [Match](#) (string PathToMatchDataCsvFile, int line_number)
Constructor to initialize a match object.
- override int **GetHashCode** ()

Properties

- uint [MatchID](#) [get]
Unique identifier for the match.
- DateTime [MatchDate](#) [get]
Date and time when the match takes place.
- byte? [ResultTeam1](#) [get]
Result of team 1 in the match.
- byte? [ResultTeam2](#) [get]
Result of team 2 in the match.
- string[] **MatchArray** [get]

3.6.1 Detailed Description

Abstract match class to set a frame for sport-specific kinds of matches.

This class provides the basic structure for any kind of sports match, including common properties like MatchID, MatchDate, and Results.

3.6.2 Constructor & Destructor Documentation

3.6.2.1 Match()

```
Match.Match (
    string PathToMatchDataCsvFile,
    int line_number ) [inline]
```

Constructor to initialize a match object.

Parameters

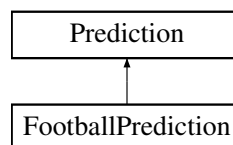
<i>PathToMatchDataCsvFile</i>	The path to the CSV file containing match data.
-------------------------------	---

The documentation for this class was generated from the following file:

- src/ClassLib/Match.cs

3.7 Prediction Class Reference

Inheritance diagram for Prediction:



Public Member Functions

- **Prediction** (uint MemberID, uint MatchID)
- bool **ValidatePrediction** ()

Properties

- uint **PredictionID** [get]
- uint **MemberID** [get]
- uint **MatchID** [get]
- DateTime **PredictionDate** [get]

The documentation for this class was generated from the following file:

- src/ClassLib/Prediction.cs

3.8 PredictionGame Class Reference

Represents a prediction game in the Sport [Prediction](#) System (SPS).

Public Member Functions

- [PredictionGame](#) ([EmailService](#) emailService)
Initializes a new instance of the [PredictionGame](#) class.
- void [Register](#) (Member member)
Registers a new member to the prediction game.
- void [Unsubscribe](#) (int MemberID)
Unsubscribes a member from the prediction game.
- void [SendDailyEmail](#) ()
Sends a daily email to all members with the matches that need to be predicted.

Properties

- uint [PredictionGameID](#) [get]
Gets the unique ID of the prediction game.
- List< ScheduleTypes > **ScheduleTypes** [get]

3.8.1 Detailed Description

Represents a prediction game in the Sport [Prediction](#) System (SPS).

3.8.2 Constructor & Destructor Documentation

3.8.2.1 PredictionGame()

```
PredictionGame.PredictionGame (  
    EmailService emailService ) [inline]
```

Initializes a new instance of the [PredictionGame](#) class.

3.8.3 Member Function Documentation

3.8.3.1 Register()

```
void PredictionGame.Register (
    Member member ) [inline]
```

Registers a new member to the prediction game.

3.8.3.2 SendDailyEmail()

```
void PredictionGame.SendDailyEmail ( ) [inline]
```

Sends a daily email to all members with the matches that need to be predicted.

3.8.3.3 Unsubscribe()

```
void PredictionGame.Unsubscribe (
    int MemberID ) [inline]
```

Unsubscribes a member from the prediction game.

3.8.4 Property Documentation

3.8.4.1 PredictionGameID

```
uint PredictionGame.PredictionGameID [get]
```

Gets the unique ID of the prediction game.

The documentation for this class was generated from the following file:

- src/ClassLib/PredictionGame.cs

3.9 Schedule< T > Class Template Reference

Generic class [Schedule](#) which represents a tournament.

Public Member Functions

- **Schedule** (ScheduleTypes schedule_type, string PathToCsvFile)

Properties

- ScheduleTypes **ScheduleID** [get]
- List< T > **Matches** [get]
- List< T > **MatchesOnDay** [get]

3.9.1 Detailed Description

Generic class [Schedule](#) which represents a tournament.

It contains a list of all the matches which take place during the tournament.

Added to that it also contains a list of all the matches on the specific day of the tournament.

Type Constraints

T: [Match](#)

The documentation for this class was generated from the following file:

- src/ClassLib/Schedule.cs

3.10 Score Class Reference

Public Member Functions

- **Score** (ScheduleTypes PredictedSchedule)
- **CalculateScore** (ScheduleTypes PredictedSchedule, [Prediction](#) prediction)

Properties

- uint **ScoreID** [get]

The documentation for this class was generated from the following file:

- src/ClassLib/Score.cs