

```
1 using System;
2 using System.Collections.Generic;
3 using System.Data.SqlClient;
4 using System.Linq;
5 using System.Text;
6 using System.Threading.Tasks;
7
8 namespace QuiddichV2._0
9 {
10     public static class QuiddichDB
11     {
12         #region Users
13
14         public static User GetUser(string username, string password)
15         {
16             SqlConnection connection = LocalDB.GetConnection();
17             string selectStatement
18                 = "SELECT Username, Password "
19                 + "FROM Reporters "
20                 + "WHERE Username = @Username "
21                 + "AND Password = @Password ";
22             SqlCommand selectCommand =
23                 new SqlCommand(selectStatement, connection);
24             selectCommand.Parameters.AddWithValue("@Username", username);
25             selectCommand.Parameters.AddWithValue("@Password", password);
26
27             try
28             {
29                 connection.Open();
30                 SqlDataReader userReader =
31                     selectCommand.ExecuteReader();
32                 if (userReader.Read())
33                 {
34                     User user = new User();
35                     user.Username = userReader["Username"].ToString();
36                     user.Password = userReader["Password"].ToString();
37                     return user;
38                 }
39                 else
40                 {
41                     return null;
42                 }
43             }
44             catch (SqlException ex)
45             {
46                 throw ex;
47             }
48             finally
49             {
50                 connection.Close();
51             }
52         }
53
54         public static void AddUser(User user)
55         {
56             SqlConnection connection = LocalDB.GetConnection();
57             string insertStatement =
58                 "INSERT Reporters " +
59                 "(Username, Password) " +
60                 "VALUES (@Username, @Password)";
61             SqlCommand insertCommand =
62                 new SqlCommand(insertStatement, connection);
63             insertCommand.Parameters.AddWithValue(
64                 "@Username", user.Username);
65             insertCommand.Parameters.AddWithValue(
66                 "@Password", user.Password);
```

```
67         try
68         {
69             connection.Open();
70             insertCommand.ExecuteNonQuery();
71         }
72         catch (SqlException ex)
73         {
74             throw ex;
75         }
76         finally
77         {
78             connection.Close();
79         }
80     }
81
82     public static bool DeleteUser(User user)
83     {
84         SqlConnection connection = LocalDB.GetConnection();
85         string deleteStatement =
86             "DELETE FROM Reporters " +
87             "WHERE Username = @Username " +
88             "AND Password = @Password ";
89         SqlCommand deleteCommand =
90             new SqlCommand(deleteStatement, connection);
91         deleteCommand.Parameters.AddWithValue(
92             "@Username", user.Username);
93         deleteCommand.Parameters.AddWithValue(
94             "@Password", user.Password);
95         try
96         {
97             connection.Open();
98             int count = deleteCommand.ExecuteNonQuery();
99             if (count > 0)
100                 return true;
101             else
102                 return false;
103         }
104         catch (SqlException ex)
105         {
106             throw ex;
107         }
108         finally
109         {
110             connection.Close();
111         }
112     }
113
114     #endregion
115
116     #region Teams
117
118     public static Team GetTeam(int teamID)
119     {
120         SqlConnection connection = LocalDB.GetConnection();
121         string selectStatement
122             = "SELECT TeamName, AbbrName, City, State, ZipCode, TeamID "
123             + "FROM Teams "
124             + "WHERE TeamID = @TeamID ";
125         SqlCommand selectCommand =
126             new SqlCommand(selectStatement, connection);
127         selectCommand.Parameters.AddWithValue("@TeamID", teamID);
128
129         try
130         {
131             connection.Open();
132             SqlDataReader teamReader =
```

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133         selectCommand.ExecuteReader();
134     if (teamReader.Read())
135     {
136         Team team = new Team();
137         team.TeamID = Convert.ToInt32(teamReader["TeamID"].ToString());
138         team.TeamName = teamReader["TeamName"].ToString();
139         team.AbbbrName = teamReader["AbbrName"].ToString();
140         team.City = teamReader["City"].ToString();
141         team.State = teamReader["State"].ToString();
142         team.ZipCode = teamReader["ZipCode"].ToString();
143
144
145         return team;
146     }
147     else
148     {
149         return null;
150     }
151 }
152 catch (SqlException ex)
153 {
154     throw ex;
155 }
156 finally
157 {
158     connection.Close();
159 }
160 }
161
162 public static void AddTeam(Team team)
163 {
164     SqlConnection connection = LocalDB.GetConnection();
165     string insertStatement =
166         "INSERT Teams " +
167         "(TeamID, TeamName, AbbrName, City, State, ZipCode) " +
168         "VALUES (@TeamID, @TeamName, @AbbrName, @City, @State, @ZipCode)";
169     SqlCommand insertCommand =
170         new SqlCommand(insertStatement, connection);
171     insertCommand.Parameters.AddWithValue(
172         "@TeamID", team.TeamID);
173     insertCommand.Parameters.AddWithValue(
174         "@TeamName", team.TeamName);
175     insertCommand.Parameters.AddWithValue(
176         "@AbbrName", team.AbbbrName);
177     insertCommand.Parameters.AddWithValue(
178         "@City", team.City);
179     insertCommand.Parameters.AddWithValue(
180         "@State", team.State);
181     insertCommand.Parameters.AddWithValue(
182         "@ZipCode", team.ZipCode);
183
184     try
185     {
186         connection.Open();
187         insertCommand.ExecuteNonQuery();
188     }
189     catch (SqlException ex)
190     {
191         throw ex;
192     }
193     finally
194     {
195         connection.Close();
196     }
197 }
198
```

```
199     public static bool UpdateTeam(Team oldTeam, Team newTeam)
200     {
201         SqlConnection connection = LocalDB.GetConnection();
202         string updateStatement =
203             "UPDATE Teams SET " +
204             "TeamID = @NewTeamID, " +
205             "TeamName = @NewTeamName, " +
206             "AbbrName = @NewAbbrName, " +
207             "City = @NewCity, " +
208             "State = @NewState, " +
209             "ZipCode = @NewZipCode " +
210
211             "WHERE TeamID = @OldTeamID " +
212             "AND TeamName = @OldTeamName " +
213             "AND AbbrName = @OldAbbrName " +
214             "AND City = @OldCity " +
215             "AND State = @OldState " +
216             "AND ZipCode = @OldZipCode ";
217
218         SqlCommand updateCommand =
219             new SqlCommand(updateStatement, connection);
220
221         updateCommand.Parameters.AddWithValue(
222             "@NewTeamID", newTeam.TeamID);
223         updateCommand.Parameters.AddWithValue(
224             "@NewTeamName", newTeam.TeamName);
225         updateCommand.Parameters.AddWithValue(
226             "@NewAbbrName", newTeam.AbbbrName);
227         updateCommand.Parameters.AddWithValue(
228             "@NewCity", newTeam.City);
229         updateCommand.Parameters.AddWithValue(
230             "@NewState", newTeam.State);
231         updateCommand.Parameters.AddWithValue(
232             "@NewZipCode", newTeam.ZipCode);
233
234         updateCommand.Parameters.AddWithValue(
235             "@OldTeamID", oldTeam.TeamID);
236         updateCommand.Parameters.AddWithValue(
237             "@OldTeamName", oldTeam.TeamName);
238         updateCommand.Parameters.AddWithValue(
239             "@OldAbbrName", oldTeam.AbbbrName);
240         updateCommand.Parameters.AddWithValue(
241             "@OldCity", oldTeam.City);
242         updateCommand.Parameters.AddWithValue(
243             "@OldState", oldTeam.State);
244         updateCommand.Parameters.AddWithValue(
245             "@OldZipCode", oldTeam.ZipCode);
246
247         try
248         {
249             connection.Open();
250             int count = updateCommand.ExecuteNonQuery();
251             if (count > 0)
252                 return true;
253             else
254                 return false;
255         }
256         catch (SqlException ex)
257         {
258             throw ex;
259         }
260         finally
261         {
262             connection.Close();
263         }
264     }
```

```
265
266 public static bool DeleteTeam(Team team)
267 {
268     SqlConnection connection = LocalDB.GetConnection();
269     string deleteStatement =
270         "DELETE FROM Teams " +
271         "WHERE TeamID = @TeamID " +
272         "AND TeamName = @TeamName " +
273         "AND AbbrName = @AbbrName " +
274         "AND City = @City " +
275         "AND State = @State " +
276         "AND ZipCode = @ZipCode ";
277     SqlCommand deleteCommand =
278         new SqlCommand(deleteStatement, connection);
279     deleteCommand.Parameters.AddWithValue(
280         "@TeamID", team.TeamID);
281     deleteCommand.Parameters.AddWithValue(
282         "@TeamName", team.TeamName);
283     deleteCommand.Parameters.AddWithValue(
284         "@AbbrName", team.AbbbrName);
285     deleteCommand.Parameters.AddWithValue(
286         "@City", team.City);
287     deleteCommand.Parameters.AddWithValue(
288         "@State", team.State);
289     deleteCommand.Parameters.AddWithValue(
290         "@ZipCode", team.ZipCode);
291     try
292     {
293         connection.Open();
294         int count = deleteCommand.ExecuteNonQuery();
295         if (count > 0)
296             return true;
297         else
298             return false;
299     }
300     catch (SqlException ex)
301     {
302         throw ex;
303     }
304     finally
305     {
306         connection.Close();
307     }
308 }
309
310 #endregion
311
312 #region Players
313
314 public static Player GetPlayer(int teamID)
315 {
316     SqlConnection connection = LocalDB.GetConnection();
317     string selectStatement
318         = "SELECT * "
319         + "FROM Players "
320         + "WHERE TeamID = @TeamID ";
321     SqlCommand selectCommand =
322         new SqlCommand(selectStatement, connection);
323     selectCommand.Parameters.AddWithValue("@TeamID", teamID);
324
325     try
326     {
327         connection.Open();
328         SqlDataReader playerReader =
329             selectCommand.ExecuteReader();
330         if (playerReader.Read())
```

```
331         {
332             Player player = new Player();
333             player.TeamID = Convert.ToInt32(playerReader["TeamID"]);
334             player.FirstName = playerReader["FirstName"].ToString();
335             player.LastName = playerReader["LastName"].ToString();
336             player.UniformNumber = Convert.ToInt32(playerReader["UniformNumber"]);
337             player.Position = playerReader["Position"].ToString();
338             return player;
339         }
340         else
341         {
342             return null;
343         }
344     }
345     catch (SqlException ex)
346     {
347         throw ex;
348     }
349     finally
350     {
351         connection.Close();
352     }
353 }
354
355 public static Player GetPlayer(int teamID, string position)
356 {
357     SqlConnection connection = LocalDB.GetConnection();
358     string selectStatement
359         = "SELECT * "
360         + "FROM Players "
361         + "WHERE TeamID = @TeamID "
362         + "AND Position = @Position ";
363     SqlCommand selectCommand =
364         new SqlCommand(selectStatement, connection);
365     selectCommand.Parameters.AddWithValue("@TeamID", teamID);
366     selectCommand.Parameters.AddWithValue("@Position", position);
367
368     try
369     {
370         connection.Open();
371         SqlDataReader playerReader =
372             selectCommand.ExecuteReader();
373         if (playerReader.Read())
374         {
375             Player player = new Player();
376             player.TeamID = Convert.ToInt32(playerReader["TeamID"]);
377             player.FirstName = playerReader["FirstName"].ToString();
378             player.LastName = playerReader["LastName"].ToString();
379             player.UniformNumber = Convert.ToInt32(playerReader["UniformNumber"]);
380             player.Position = playerReader["Position"].ToString();
381             return player;
382         }
383         else
384         {
385             return null;
386         }
387     }
388     catch (SqlException ex)
389     {
390         throw ex;
391     }
392     finally
393     {
394         connection.Close();
395     }
396 }
```

```
397
398 public static Player GetPlayer(int teamID, string firstName, string lastName)
399 {
400     SqlConnection connection = LocalDB.GetConnection();
401     string selectStatement
402         = "SELECT * "
403         + "FROM Players "
404         + "WHERE TeamID = @TeamID "
405         + "AND FirstName = @FirstName "
406         + "AND LastName = @LastName ";
407     SqlCommand selectCommand =
408         new SqlCommand(selectStatement, connection);
409     selectCommand.Parameters.AddWithValue("@TeamID", teamID);
410     selectCommand.Parameters.AddWithValue("@FirstName", firstName);
411     selectCommand.Parameters.AddWithValue("@LastName", lastName);
412
413     try
414     {
415         connection.Open();
416         SqlDataReader playerReader =
417             selectCommand.ExecuteReader();
418         if (playerReader.Read())
419         {
420             Player player = new Player();
421             player.TeamID = Convert.ToInt32(playerReader["TeamID"]);
422             player.FirstName = playerReader["FirstName"].ToString();
423             player.LastName = playerReader["LastName"].ToString();
424             player.UniformNumber = Convert.ToInt32(playerReader["UniformNumber"]);
425             player.Position = playerReader["Position"].ToString();
426             return player;
427         }
428         else
429         {
430             return null;
431         }
432     }
433     catch (SqlException ex)
434     {
435         throw ex;
436     }
437     finally
438     {
439         connection.Close();
440     }
441 }
442
443 public static void AddPlayer(Player player)
444 {
445     SqlConnection connection = LocalDB.GetConnection();
446     string insertStatement =
447         "INSERT Players " +
448         "(TeamID, FirstName, LastName, UniformNumber, Position) " +
449         "VALUES (@TeamID, @FirstName, @LastName, @UniformNumber, @Position)";
450     SqlCommand insertCommand =
451         new SqlCommand(insertStatement, connection);
452     insertCommand.Parameters.AddWithValue(
453         "@TeamID", player.TeamID);
454     insertCommand.Parameters.AddWithValue(
455         "@FirstName", player.FirstName);
456     insertCommand.Parameters.AddWithValue(
457         "@LastName", player.LastName);
458     insertCommand.Parameters.AddWithValue(
459         "@UniformNumber", player.UniformNumber);
460     insertCommand.Parameters.AddWithValue(
461         "@Position", player.Position);
462 }
```

```
463         try
464         {
465             connection.Open();
466             insertCommand.ExecuteNonQuery();
467         }
468         catch (SqlException ex)
469         {
470             throw ex;
471         }
472         finally
473         {
474             connection.Close();
475         }
476     }
477
478     public static bool UpdatePlayer(Player oldPlayer, Player newPlayer)
479     {
480         SqlConnection connection = LocalDB.GetConnection();
481         string updateStatement =
482             "UPDATE Players SET " +
483             "TeamID = @NewTeamID, " +
484             "FirstName = @NewFirstName, " +
485             "LastName = @NewLastName, " +
486             "UniformNumber = @NewUniformNumber, " +
487             "Position = @NewPosition " +
488
489             "WHERE TeamID = @OldTeamID " +
490             "AND FirstName = @OldFirstName " +
491             "AND LastName = @OldLastName " +
492             "AND UniformNumber = @OldUniformNumber " +
493             "AND Position = @OldPosition ";
494
495         SqlCommand updateCommand =
496             new SqlCommand(updateStatement, connection);
497
498         updateCommand.Parameters.AddWithValue(
499             "@NewTeamID", newPlayer.TeamID);
500         updateCommand.Parameters.AddWithValue(
501             "@NewFirstName", newPlayer.FirstName);
502         updateCommand.Parameters.AddWithValue(
503             "@NewLastName", newPlayer.LastName);
504         updateCommand.Parameters.AddWithValue(
505             "@NewUniformNumber", newPlayer.UniformNumber);
506         updateCommand.Parameters.AddWithValue(
507             "@NewPosition", newPlayer.Position);
508
509         updateCommand.Parameters.AddWithValue(
510             "@OldTeamID", oldPlayer.TeamID);
511         updateCommand.Parameters.AddWithValue(
512             "@OldFirstName", oldPlayer.FirstName);
513         updateCommand.Parameters.AddWithValue(
514             "@OldLastName", oldPlayer.LastName);
515         updateCommand.Parameters.AddWithValue(
516             "@OldUniformNumber", oldPlayer.UniformNumber);
517         updateCommand.Parameters.AddWithValue(
518             "@OldPosition", oldPlayer.Position);
519
520         try
521         {
522             connection.Open();
523             int count = updateCommand.ExecuteNonQuery();
524             if (count > 0)
525                 return true;
526             else
527                 return false;
528         }
```



```
529         catch (SQLException ex)
530         {
531             throw ex;
532         }
533     finally
534     {
535         connection.Close();
536     }
537 }
538
539 public static bool DeletePlayer(Player player)
540 {
541     SqlConnection connection = LocalDB.GetConnection();
542     string deleteStatement =
543         "DELETE FROM Players " +
544         "WHERE TeamID = @TeamID " +
545         "AND FirstName = @FirstName " +
546         "AND LastName = @LastName " +
547         "AND UniformNumber = @UniformNumber " +
548         "AND Position = @Position ";
549
550     SqlCommand deleteCommand =
551         new SqlCommand(deleteStatement, connection);
552     deleteCommand.Parameters.AddWithValue(
553         "@TeamID", player.TeamID);
554     deleteCommand.Parameters.AddWithValue(
555         "@FirstName", player.FirstName);
556     deleteCommand.Parameters.AddWithValue(
557         "@LastName", player.LastName);
558     deleteCommand.Parameters.AddWithValue(
559         "@UniformNumber", player.UniformNumber);
560     deleteCommand.Parameters.AddWithValue(
561         "@Position", player.Position);
562     try
563     {
564         connection.Open();
565         int count = deleteCommand.ExecuteNonQuery();
566         if (count > 0)
567             return true;
568         else
569             return false;
570     }
571     catch (SQLException ex)
572     {
573         throw ex;
574     }
575     finally
576     {
577         connection.Close();
578     }
579 }
580
581 #endregion
582 }
583 }
584
```