```
 1  using System;
 2  using System.Collections.Generic;
 3  using System.Linq;
 4  using System.Text;
 5  using System.Threading.Tasks;
 6  using System.Data;
 7  using System.Data.SqlClient;
 8
 9  namespace ConsoleApp
10  {
11      public static class CourseDatabase
12      {
13          public static void AddCourse(string CName, string CDate, string
              CTrainer)
14          {
15              string conString = "Data Source = DESKTOP-2MLE68C\
                  \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                   = True;";
16              SqlConnection con = new SqlConnection(conString);
17
18              string sql = "Insert into Course (CourseName, StartDate,
                  Trainer) values (@CName, @CDate, @CTrainer)";
19
20              SqlParameter p1 = new SqlParameter();
21              SqlParameter p2 = new SqlParameter();
22              SqlParameter p3 = new SqlParameter();
23
24              p1.ParameterName = "@CName";
25              p2.ParameterName = "@CDate";
26              p3.ParameterName = "@CTrainer";
27
28              p1.DbType = DbType.String;
29              p2.DbType = DbType.String;
30              p3.DbType = DbType.String;
31
32              p1.Size = 100;
33              p2.Size = 25;
34              p3.Size = 100;
35
36              p1.Value = CName;
37              p2.Value = CDate;
38              p3.Value = CTrainer;
39
40              SqlCommand conCommand = new SqlCommand(sql, con);
41              conCommand.Parameters.Add(p1);
42              conCommand.Parameters.Add(p2);
43              conCommand.Parameters.Add(p3);
44
45
```

```
46              con.Open();
47
48
49              int count = conCommand.ExecuteNonQuery();
50              if (count == 1)
51              {
52                  Console.WriteLine("The Course has been Added! ");
53
54              }
55              con.Close();
56          }
57
58          public static void RemoveCourse(string Trainer)
59          {
60              string conString = "Data Source =DESKTOP-2MLE68C\
                  \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                   = True;";
61              SqlConnection con = new SqlConnection(conString);
62
63              string sql = "Delete from Course where Trainer = @CTrainer";
64
65              SqlParameter p1 = new SqlParameter();
66              p1.ParameterName = "@CTrainer";
67              p1.DbType = DbType.String;
68              p1.Size = 25;
69              p1.Value = Trainer;
70
71              SqlCommand sqlCommand = new SqlCommand(sql, con);
72              sqlCommand.Parameters.Add(p1);
73
74
75              con.Open();
76              int count = sqlCommand.ExecuteNonQuery();
77              if (count == 1)
78              {
79                  Console.WriteLine("The Course is Deleted from the
                      Database");
80              }
81              con.Close();
82          }
83
84          public static void EditCourse(string Trainer)
85          {
86
87              string conString = "Data Source =DESKTOP-2MLE68C\
                  \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                   = True;";
88              SqlConnection con = new SqlConnection(conString);
89
```

```
90              string sql = "update Course set CourseName = @CName, StartDate
                   = @CDate, Trainer = @CTrainer where Trainer = @ct";
91
92              Console.WriteLine("Enter the Updated Course Name : ");
93              string updateName = Console.ReadLine();
94              Console.WriteLine("Enter the Updated Course Date (YYYY-MM-
                  DD) : ");
95              string updateDate = Console.ReadLine();
96              Console.WriteLine("Enter the Updated Course Trainer : ");
97              string updateTrainer = Console.ReadLine();
98
99              SqlParameter p1 = new SqlParameter();
100             SqlParameter p2 = new SqlParameter();
101             SqlParameter p3 = new SqlParameter();
102             SqlParameter p4 = new SqlParameter();
103
104             p1.ParameterName = "@CName";
105             p1.DbType = DbType.String;
106             p1.Size = 100;
107             p1.Value = updateName;
108
109             p2.ParameterName = "@CDate";
110             p2.Value = updateDate;
111             p2.Size = 25;
112             p2.DbType = DbType.String;
113
114             p3.ParameterName = "@CTrainer";
115             p3.DbType = DbType.String;
116             p3.Size = 100;
117             p3.Value = updateTrainer;
118
119             p4.ParameterName = "@Ct";
120             p4.DbType = DbType.String;
121             p4.Size = 100;
122             p4.Value = Trainer;
123
124             SqlCommand sqlCommand = new SqlCommand(sql, con);
125             sqlCommand.Parameters.Add(p1);
126             sqlCommand.Parameters.Add(p2);
127             sqlCommand.Parameters.Add(p3);
128             sqlCommand.Parameters.Add(p4);
129
130             con.Open();
131
132             int count = sqlCommand.ExecuteNonQuery();
133             if (count == 1)
134             {
135                 Console.WriteLine("The Course is Updated!");
136             }
```

```
137
138             con.Close();
139         }
140
141         public static void SearchCourse()
142         {
143             string conString = "Data Source =DESKTOP-2MLE68C\
                  \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                   = True;";
144             SqlConnection con = new SqlConnection(conString);
145
146             string sql = "select * from Course where Trainer =
                  @CTrainer;";
147
148             Console.WriteLine("Enter the Trainer to Name to Search Course
                  = ");
149             string Trainer = Console.ReadLine();
150
151             SqlParameter p1 = new SqlParameter();
152             p1.ParameterName = "@CTrainer";
153             p1.DbType = DbType.String;
154             p1.Size = 100;
155             p1.Value = Trainer;
156
157             SqlCommand sqlCommand = new SqlCommand(sql, con);
158             sqlCommand.Parameters.Add(p1);
159             con.Open();
160             SqlDataReader reader = sqlCommand.ExecuteReader();
161             if (reader.Read())
162             {
163                 Console.WriteLine("Course is Available as \n Course Name :
                       " + reader[1] + "\n Course Date : " + reader[2] + "\n
                      Course Trainer : " + reader[3]);
164
165             }
166             else
167             {
168                 Console.WriteLine("Course is Not Available! ");
169             }
170
171             con.Close();
172         }
173         public static void ShowCourses()
174         {
175
176             string conString = "Data Source =DESKTOP-2MLE68C\
                  \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                   = True;";
177             SqlConnection con = new SqlConnection(conString);
```

```
178
179             string sql = "select * from Course;";
180             SqlCommand sqlCommand = new SqlCommand(sql, con);
181
182             con.Open();
183
184             SqlDataReader reader = sqlCommand.ExecuteReader();
185             Console.WriteLine("\t\t\t\t\t\tCourse Details\t\t\t\t\t\t\n");
186             Console.WriteLine("\t Course ID \t" + "\t Course Name
                  (Trainer) \t");
187             int i = 1;
188             while (reader.Read())
189             {
190                 Console.WriteLine("\t\t " + reader[0] + " \t" + reader[1]
                      + " \t( " + reader[3] + " )\t" );
191                 Console.WriteLine();
192             }
193
194             con.Close();
195
196         }
197
198         public static void CourseStudents(int cid)
199         {
200             string conString = "Data Source =DESKTOP-2MLE68C\
                  \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                   = True;";
201             SqlConnection con = new SqlConnection(conString);
202             SqlCommand sqlCommand = new SqlCommand();
203             sqlCommand.Connection = con;
204             sqlCommand.CommandType =
                  System.Data.CommandType.StoredProcedure;
205             sqlCommand.CommandText = "showStudents";
206             SqlParameter p1 = new SqlParameter("@Courseid",cid);
207             sqlCommand.Parameters.Add(p1);
208
209             con.Open();
210
211             SqlDataReader reader = sqlCommand.ExecuteReader();
212
213             Console.WriteLine("\t\t\t\t\t\tStudent Details\t\t\t\t\t\t
                  \n");
214             Console.WriteLine("\t Student ID \t" + "\t Student Name \t" +
                  "\t Year of Passing \t" + "\t Course ID \t");
215             while (reader.Read())
216             {
217                 Console.WriteLine("\t\t " + reader[0] + " \t\t\t" + reader
                      [1] + " \t\t\t" + reader[2] + " \t\t\t\t" + reader[3]);
218                 Console.WriteLine();
```

```
219             }
220
221
222             con.Close();
223         }
224
225     }
226 }
227
```