

```
1 using System;
2 using System.Collections.Generic;
3 using System.Data.SqlClient;
4 using System.Data;
5 using System.Linq;
6 using System.Text;
7 using System.Threading.Tasks;
8
9 namespace ConsoleApp
10 {
11     internal class StudentDatabase
12     {
13         public static void AddStudent(string sName, int sYearPass, int sCourseid)
14         {
15             string conString = "Data Source =DESKTOP-2MLE68C\
16                               \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
17                               = True;";
18             SqlConnection con = new SqlConnection(conString);
19
20             string sql = "Insert into Student (SName, YearOfPassing,
21                               CourseId) values (@SName, @SYear, @SCId)";
22
23             SqlParameter p1 = new SqlParameter();
24             SqlParameter p2 = new SqlParameter();
25             SqlParameter p3 = new SqlParameter();
26
27             p1.ParameterName = "@SName";
28             p2.ParameterName = "@SYear";
29             p3.ParameterName = "@SCId";
30
31             p1.DbType = DbType.String;
32             p2.DbType = DbType.Int32;
33             p3.DbType = DbType.Int32;
34             p1.Size = 100;
35             p2.Size = 15;
36             p3.Size = 6;
37
38             p1.Value = sName;
39             p2.Value = sYearPass;
40             p3.Value = sCourseid;
41
42             SqlCommand conCommand = new SqlCommand(sql, con);
43             conCommand.Parameters.Add(p1);
44             conCommand.Parameters.Add(p2);
45             conCommand.Parameters.Add(p3);
46
47             con.Open();
```

```
46         int count = conCommand.ExecuteNonQuery();
47         if (count == 1)
48         {
49             Console.WriteLine("The Student Details has been Added! ");
50
51         }
52         con.Close();
53     }
54
55     public static void RemoveStudent(string SName)
56     {
57         string conString = "Data Source =DESKTOP-2MLE68C\
                             \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                             = True;";
58         SqlConnection con = new SqlConnection(conString);
59
60         string sql = "Delete from Student where SName = @Snm;";
61
62         SqlParameter p1 = new SqlParameter();
63         p1.ParameterName = "@Snm";
64         p1.DbType = DbType.String;
65         p1.Size = 30;
66         p1.Value = SName;
67
68         SqlCommand sqlCommand = new SqlCommand(sql, con);
69         sqlCommand.Parameters.Add(p1);
70
71
72         con.Open();
73         int count = sqlCommand.ExecuteNonQuery();
74         if (count == 1)
75         {
76             Console.WriteLine("The Student is Deleted from the
                             Database");
77         }
78         con.Close();
79     }
80
81     public static void EditStudent(int sID)
82     {
83
84         string conString = "Data Source =DESKTOP-2MLE68C\
                             \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                             = True;";
85         SqlConnection con = new SqlConnection(conString);
86
87         string sql = "update Student set SName = @SName, YearOfPassing
                             = @SYear, CourseId = @CId where StudentId = @ID";
88
```

```
89     Console.WriteLine("Enter the Updated Student Name : ");
90     string updateName = Console.ReadLine();
91     Console.WriteLine("Enter the Updated Student Course Passing      ↗
        Year (YYYY) : ");
92     string updateDate = Console.ReadLine();
93     Console.WriteLine("Enter the Updated Student Course ID : ");
94     string updateTrainer = Console.ReadLine();
95
96     SqlParameter p1 = new SqlParameter();
97     SqlParameter p2 = new SqlParameter();
98     SqlParameter p3 = new SqlParameter();
99     SqlParameter p4 = new SqlParameter();
100
101     p1.ParameterName = "@SName";
102     p1.DbType = DbType.String;
103     p1.Size = 100;
104     p1.Value = updateName;
105
106     p2.ParameterName = "@SYear";
107     p2.Value = updateDate;
108     p2.Size = 25;
109     p2.DbType = DbType.String;
110
111     p3.ParameterName = "@CId";
112     p3.DbType = DbType.String;
113     p3.Size = 100;
114     p3.Value = updateTrainer;
115
116     p4.ParameterName = "@ID";
117     p4.DbType = DbType.Int32;
118     p4.Size = 6;
119     p4.Value = sID;
120
121     SqlCommand sqlCommand = new SqlCommand(sql, con);
122     sqlCommand.Parameters.Add(p1);
123     sqlCommand.Parameters.Add(p2);
124     sqlCommand.Parameters.Add(p3);
125     sqlCommand.Parameters.Add(p4);
126
127     con.Open();
128
129     int count = sqlCommand.ExecuteNonQuery();
130     if (count == 1)
131     {
132         Console.WriteLine("The Student Details are Updated!");
133     }
134
135     con.Close();
136 }
```

```
137
138     public static void SearchStudent()
139     {
140         string conString = "Data Source =DESKTOP-2MLE68C\
                               \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                               = True;";
141         SqlConnection con = new SqlConnection(conString);
142
143         string sql = "select * from Student where StudentId = @Sid;";
144
145         Console.WriteLine("Enter the Student ID to search = ");
146         int studentid = Convert.ToInt32(Console.ReadLine());
147
148         SqlParameter p1 = new SqlParameter();
149         p1.ParameterName = "@Sid";
150         p1.DbType = DbType.Int32;
151         p1.Size = 5;
152         p1.Value = studentid;
153
154         SqlCommand sqlCommand = new SqlCommand(sql, con);
155         sqlCommand.Parameters.Add(p1);
156         con.Open();
157         SqlDataReader reader = sqlCommand.ExecuteReader();
158         if (reader.Read())
159         {
160             Console.WriteLine("Student Details are Available as \n
                               Student Name : " + reader[1] + "\n Student Year of
                               Passing : " + reader[2] + "\n Course ID : " + reader
                               [3]);
161
162         }
163         else
164         {
165             Console.WriteLine("Student Details are Not Available! ");
166         }
167
168         con.Close();
169     }
170
171     public static void ShowStudents()
172     {
173
174         string conString = "Data Source =DESKTOP-2MLE68C\
                               \SQLEXPRESS;Initial Catalog = armstrong; Integrated Security
                               = True;";
175         SqlConnection con = new SqlConnection(conString);
176
177         string sql = "select * from Student;";
178         SqlCommand sqlCommand = new SqlCommand(sql, con);
```

```
179
180         con.Open();
181
182         SqlDataReader reader = sqlCommand.ExecuteReader();
183         Console.WriteLine("\t\t\t\t\tStudent Details\t\t\t\t\t  ↗
184         \n");
185         Console.WriteLine("\t Student ID \t" + "\t Student Name \t" + ↗
186         "\t Year of Passing \t" + "\t Course ID \t" );
187         while (reader.Read())
188         {
189             Console.WriteLine("\t\t " + reader[0] + " \t\t\t" + ↗
190             reader[1] + " \t\t\t" + reader[2] + " \t\t\t\t" + ↗
191             reader[3]);
192             Console.WriteLine();
193         }
194     }
195 }
196 }
197
```