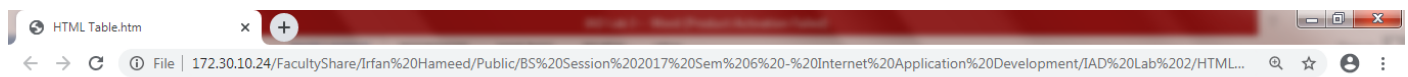


Description of Task

Consider the table shown in Figure 1 and Code Listing 1. Try to develop a solution of the following problem?

Write code using C/C++ which performs following tasks:

- Prompt the user to enter number of columns?
- Prompt the user to enter number of rows?
- Get data cell by cell from user using a loop?
- Generate an html page to display above data in a table?
- Store the page in a folder on desktop.



HTML Table

Company	Contact	Country
Alfreds Futterkiste	Maria Anders	Germany
Centro comercial Moctezuma	Francisco Chang	Mexico
Ernst Handel	Roland Mendel	Austria
Island Trading	Helen Bennett	UK
Laughing Bacchus Winecellars	Yoshi Tannamuri	Canada
Magazzini Alimentari Riuniti	Giovanni Rovelli	Italy



Figure 1

Code Listing 1

```
<!DOCTYPE html>
<html>
<head>
<style>
table {
  font-family: arial, sans-serif;
  border-collapse: collapse;
  width: 100%;
}
```

```
td, th {  
  border: 1px solid #dddddd;  
  text-align: left;  
  padding: 8px;  
}
```

```
tr:nth-child(even) {  
  background-color: #dddddd;  
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h2>HTML Table</h2>
```

```
<table>
```

```
<tr>
```

```
<th>Company</th>
```

```
<th>Contact</th>
```

```
<th>Country</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Alfreds Futterkiste</td>
```

```
<td>Maria Anders</td>
```

```
<td>Germany</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Centro comercial Moctezuma</td>
```

```
<td>Francisco Chang</td>
```

```
<td>Mexico</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Ernst Handel</td>
```

```
<td>Roland Mendel</td>
```

```
<td>Austria</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Island Trading</td>
```

```
<td>Helen Bennett</td>
```

```
<td>UK</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Laughing Bacchus Winecellars</td>
```

```
<td>Yoshi Tannamuri</td>
```

```
<td>Canada</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Magazzini Alimentari Riuniti</td>
```

```
<td>Giovanni Rovelli</td>
```

```
<td>Italy</td>
```

```
</tr>
```

```
</table>
```

```
</body>
```

```
</html>
```

.cpp file:

```
#include <iostream>
#include <fstream>
#include <string>
using namespace std;

int main() {
    string data;
    int rownumber, columnnumber;

    cout << "Enter Number of Rows: ";
    cin >> rownumber;
    cout << "Enter Number of Columns: ";
    cin >> columnnumber;
    cin.ignore(); // clear newline from input buffer

    ofstream file("index.html");

    if (file.is_open()) {
        file << "<!DOCTYPE html>\n<html>\n<head>\n<style>\n";
        file << "table {font-family: Arial, sans-serif; border-collapse: collapse; width: 100%;}\n";
        file << "td, th {border: 1px solid #dddddd; text-align: left; padding: 8px;}\n";
        file << "tr:nth-child(even) {background-color: #dddddd;}\n";
        file << "</style>\n</head>\n<body>\n";
        file << "<h2>HTML Table</h2>\n<table>\n";

        for (int i = 0; i < rownumber; i++) {
            file << "<tr>";
            for (int j = 0; j < columnnumber; j++) {
                cout << "Enter Your Data # [" << i + 1 << "][" << j + 1 << "]: ";
                getline(cin, data);
                if (i == 0)
                    file << "<th>" << data << "</th>";
                else
                    file << "<td>" << data << "</td>";
            }
            file << "</tr>\n";
        }

        file << "</table>\n</body>\n</html>";
        file.close();
        cout << "\nData written successfully to index.html!\n";
    }
    else {
        cout << "Error opening file!\n";
    }

    return 0;
}
```

Code Snippet:

```
Project5 (Global Scope) main()
#include <iostream>
#include <fstream>
#include <string>
using namespace std;

int main() {
    string data;
    int rownumber, columnnumber;

    cout << "Enter Number of Rows: ";
    cin >> rownumber;
    cout << "Enter Number of Columns: ";
    cin >> columnnumber;
    cin.ignore(); // clear newline from input buffer

    ofstream file("index.html");

    if (file.is_open()) {
        file << "<!DOCTYPE html>\n<html>\n<head>\n<style>\n";
        file << "table {font-family: Arial, sans-serif; border-collapse: collapse; width: 100%;}\n";
        file << "td, th {border: 1px solid #dddddd; text-align: left; padding: 8px;}\n";
        file << "tr:nth-child(even) {background-color: #dddddd;}\n";
        file << "</style>\n</head>\n<body>\n";
        file << "<h2>HTML Table</h2>\n<table>\n";

        for (int i = 0; i < rownumber; i++) {
            file << "<tr>";
            for (int j = 0; j < columnnumber; j++) {
                cout << "Enter Your Data # [" << i + 1 << "][" << j + 1 << "]: ";
                getline(cin, data);
                if (i == 0)
                    file << "<th>" << data << "</th>";
                else
                    file << "<td>" << data << "</td>";
            }
            file << "</tr>\n";
        }

        file << "</table>\n</body>\n</html>";
        file.close();
        cout << "\nData written successfully to index.html!\n";
    }
    else {
        cout << "Error opening file!\n";
    }

    return 0;
}
```

Output:

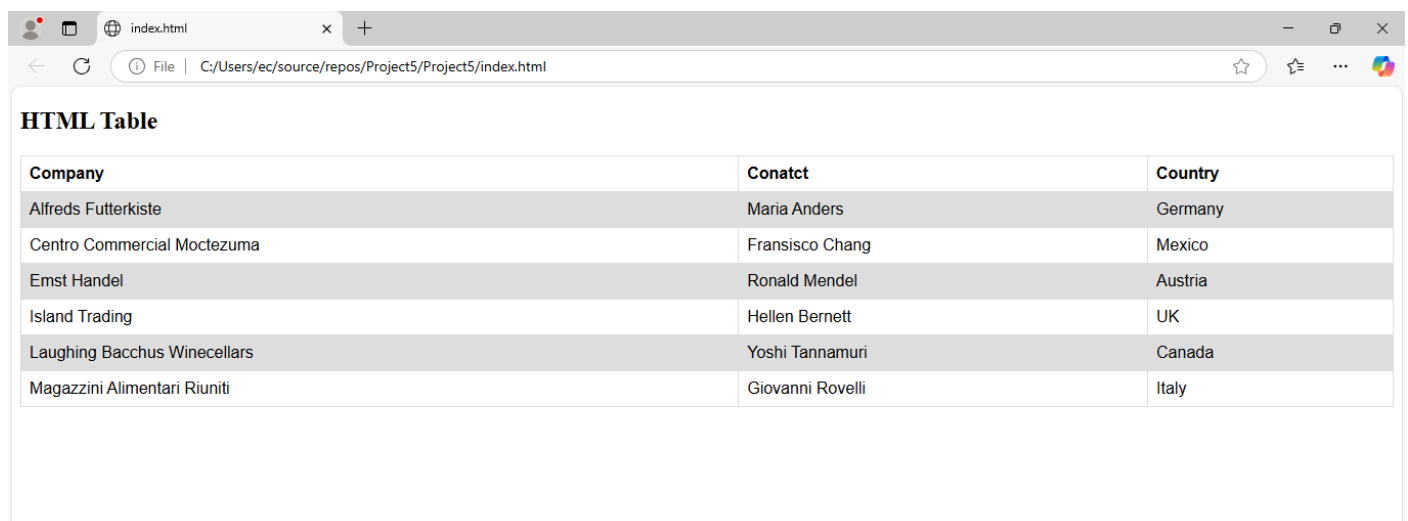
Microsoft Visual Studio Debug Console

```
Enter Your Data # [1][1]: Company
Enter Your Data # [1][2]: Conatct
Enter Your Data # [1][3]: Country
Enter Your Data # [2][1]: Alfreds Futterkiste
Enter Your Data # [2][2]: Maria Anders
Enter Your Data # [2][3]: Germany
Enter Your Data # [3][1]: Centro Commercial Moctezuma
Enter Your Data # [3][2]: Fransisco Chang
Enter Your Data # [3][3]: Mexico
Enter Your Data # [4][1]: Emst Handel
Enter Your Data # [4][2]: Ronald Mendel
Enter Your Data # [4][3]: Austria
Enter Your Data # [5][1]: Island Trading
Enter Your Data # [5][2]: Hellen Bernett
Enter Your Data # [5][3]: UK
Enter Your Data # [6][1]: Laughing Bacchus Winecellars
Enter Your Data # [6][2]: Yoshi Tannamuri
Enter Your Data # [6][3]: Canada
Enter Your Data # [7][1]: Magazzini Alimentari Riuniti
Enter Your Data # [7][2]: Giovanni Rovelli
Enter Your Data # [7][3]: Italy

Data written successfully to index.html!

C:\Users\ec\source\repos\Project5\x64\Debug\Project5.exe (process 18476) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console window.
Press any key to close this window . . .
```

Opening in the Browser:



The screenshot shows a web browser window with a single tab titled 'index.html'. The address bar shows the file path 'C:/Users/ec/source/repos/Project5/Project5/index.html'. The main content area displays an 'HTML Table' with the following data:

Company	Conatct	Country
Alfreds Futterkiste	Maria Anders	Germany
Centro Commercial Moctezuma	Fransisco Chang	Mexico
Emst Handel	Ronald Mendel	Austria
Island Trading	Hellen Bernett	UK
Laughing Bacchus Winecellars	Yoshi Tannamuri	Canada
Magazzini Alimentari Riuniti	Giovanni Rovelli	Italy