

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.**

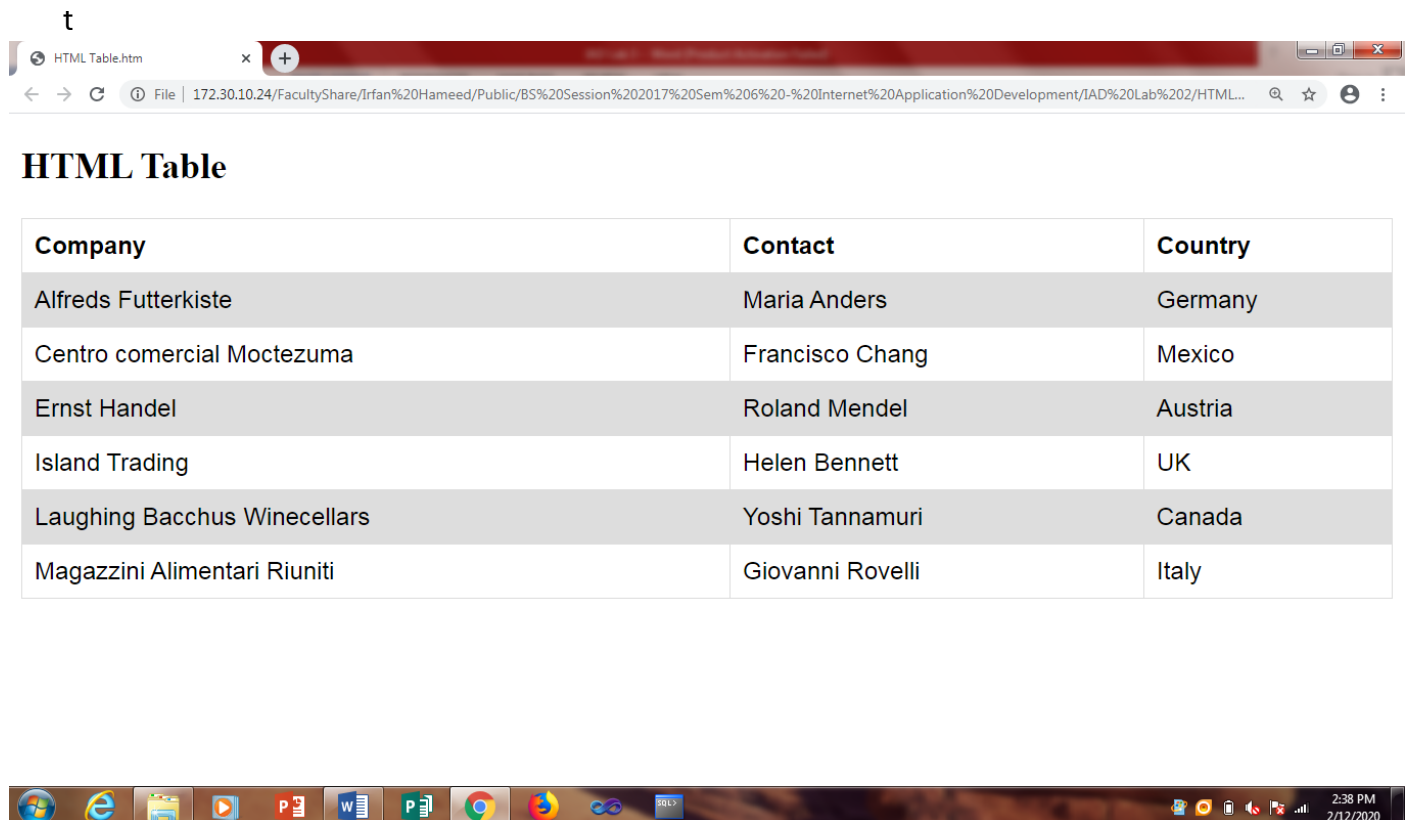


Figure 1

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>
```

Solution Of the Problem:

C++ Code:

```
#include <iostream>
#include <fstream>
#include <string>
using namespace std;
int main() {
    string data;
    int columnnumber, rownumber;
    cout<<"Enter Number of Rows ";
    cin>>rownumber;
    cout<<"Enter Number of Columns ";
    cin>>columnnumber;
    cin.ignore();
    ofstream file("index.html");

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

        for (int i = 0; i < rownumber; i++) {
            file << "\n<tr>";

            for (int j=0; j< columnnumber; j++)
            {
                cout<<"Enter Your Data # [" << i+1 <<"] [" <<j+1<<"] : ";
                getline(cin, data);
                if (i==0)
                {
```

```

        file << "\n  <th>" << data << "</th>";

    }

    else

        file << "\n  <td>" << data << "</td>";

    }

    file << "\n</tr>";

}

file << "\n</table>\n</body>\n</html> ";

file.close();

cout << "\nData written successfully!\n";

} else {

    cout << "Error opening file!\n";

}

return 0;

}

```

C++ Code Snippet:

```

#include <iostream>
#include <fstream>
#include <string>
using namespace std;
int main() {
    string data;
    int columnnumber, rownumber;
    cout << "Enter Number of Rows ";
    cin >> rownumber;
    cout << "Enter Number of Columns ";
    cin >> columnnumber;
    cin.ignore();
    ofstream file("index.html");

    if (file.is_open()) {
        file << "<!DOCTYPE html> \n<html> \n<head> \n<style> \n<table {font-family: arial, sans-serif; border-collapse: collapse; width: 100%; } \n<td, th { border: 1px solid black; padding: 5px; } \n</style> \n</head> \n<tbody> \n";
        for (int i = 0; i < rownumber; i++) {
            file << "\n<tr>";
            for (int j = 0; j < columnnumber; j++) {
                cout << "Enter Your Data # [" << i+1 << "] [" << j+1 << "] : ";
                getline(cin, data);
                if (i == 0) {
                    file << "\n  <th>" << data << "</th>";
                }
                else {
                    file << "\n  <td>" << data << "</td>";
                }
                file << "\n</tr>";
            }
            file << "\n</tbody>\n</table>\n</html> ";
            file.close();
            cout << "\nData written successfully!\n";
        }
        else {
            cout << "Error opening file!\n";
        }
        return 0;
    }
}

```

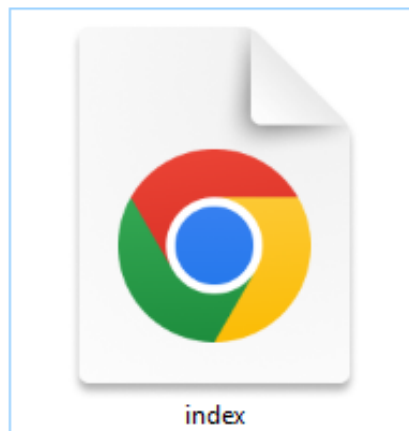
C++ Code Output:

```
C:\Users\zoyle\3D Objects\MyCppFile.exe
Enter Number of Rows 7
Enter Number of Columns 3
Enter Your Data # [1][1] : Company
Enter Your Data # [1][2] : Contact
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] : Ernst 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!

-----
Process exited after 215 seconds with return value 0
Press any key to continue . . .
```

Generated HTML File:



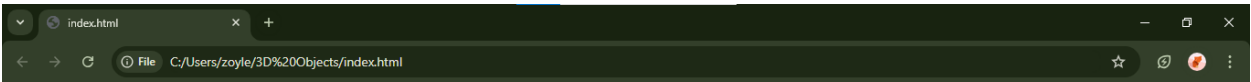
Opening File with Notepad:

 index - Notepad

File Edit Format View Help

```
<!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>
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<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>
```

Opening File in the browser:



HTML Table

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