In this lab, we will write a program to determine average test score for ten students who each took three tests. Start a new project named lab2. The data will be stored in an input file (lab2.dat) and the results will be printed to an output file (lab2.out).

Notes:
1. Create lab2.dat file inside Resource Files and copy the following data.
2. The data:

<table>
<thead>
<tr>
<th>Name</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnny</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Suzie</td>
<td>95</td>
<td>85</td>
<td>75</td>
</tr>
<tr>
<td>Allie</td>
<td>85</td>
<td>85</td>
<td>80</td>
</tr>
<tr>
<td>George</td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Henry</td>
<td>75</td>
<td>85</td>
<td>82</td>
</tr>
<tr>
<td>Billie</td>
<td>100</td>
<td>92</td>
<td>83</td>
</tr>
<tr>
<td>Hillary</td>
<td>90</td>
<td>91</td>
<td>93</td>
</tr>
<tr>
<td>Sally</td>
<td>65</td>
<td>70</td>
<td>78</td>
</tr>
<tr>
<td>Tom</td>
<td>85</td>
<td>90</td>
<td>97</td>
</tr>
<tr>
<td>Bill</td>
<td>75</td>
<td>85</td>
<td>100</td>
</tr>
</tbody>
</table>

3. Create lab2.cpp file inside Source Files.
4. Use comments to put your name, class and the date and brief description about the program at the top of your program.
5. Copy the following source code as shown below.
6. Build and run the program. If successful, the output file lab2.out will be created inside the lab2 project folder where .cpp file is.
7. Verify the output is correct!!
8. Copy the lab2.cpp file inside your K:\username.

Lab2.cpp

/*
 Write programmer & program information
 */
#include <iostream>
#include <fstream> //library for reading from and writing to files
#include <string>  //library for using string data type
using namespace std; //namespace where cout and endl are defined;

int main()
{
    string name; //variable to store student’s name
    int i, test1, test2, test3; //variables to store tests scores and loop variable i
    double average; //variable to store average

    ifstream fin; //declare fin variable to read data from file
    ofstream fout; //declare fout variable to write data to a file

    fin.open("lab2.dat"); //open lab2.dat file to read data from
    fout.open("lab2.out"); //open lab2.out to write data to
    for(i=1; i<=10; i++)
    {
        fin >> name >> test1 >> test2 >> test3; //read name and 2 tests 1 line at a time
        average = 1.0 * (test1 + test2 + test3) / 3; //calculate the average test score
        fout << name << " had scores of " << test1 << ", " << test2 << ", and " << test3 << " for an average of " << average << ". " << endl;
    }
    fout.close();
    fin.close();
    cout << "Done reading data and calculating average scores for each student and writing the results to a file!" << endl;
    system("pause"); //use cin.get() to pause the console on mac and linux
    return 0;
}