ASSIGNMENT NO.2

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A)

CODE:-

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

// Function to swap two values
void swap(float &a, float &b) {
    float temp = a;
    a = b;
    b = temp;
}
// Bubble sort function
void bubbleSort(float arr[], int size) {
    for (int i = 0; i < size - 1; i++) {
        for (int j = 0; j < size - i - 1; j++) {
            if (arr[j] > arr[j + 1]) {
                swap(arr[j], arr[j + 1]);
            }
        }
    }
}

int main() {
```

```
const int MAX_SIZE = 1000;
float temperatures[MAX_SIZE];
int count = 0;

// Open the input file
ifstream inFile("temperatures.txt");

if (!inFile) {
    cout << "Error opening input file.\n";
    return 1;
}
// Read temperatures from file
while (inFile >> temperatures[count]) {
    count++;
    if (count >= MAX_SIZE) {
        cout << "Too many temperatures. Max allowed is " << MAX_SIZE << ".\n";
        break;
    }
}
inFile.close();

// Sort the temperatures using Bubble Sort
bubbleSort(temperatures, count);

// Display the sorted temperatures
cout << "Sorted Temperatures (Ascending Order):\n";
for (int i = 0; i < count; i++) {
    cout << temperatures[i] << endl;
}
```

```
    // Write the sorted temperatures to a new file
    ofstream outFile("sorted_temperatures.txt");

    if (!outFile) {
        cout << "Error opening output file.\n";
        return 1;
    }
    for (int i = 0; i < count; i++) {
        outFile << temperatures[i] << endl;
    }
    outFile.close();
    cout << "\nSorted temperatures saved to 'sorted_temperatures.txt'.\n";
    return 0;
}
```

OUTPUT:-