BUCKET SORT

```cpp
#include <iostream>
#include <algorithm>
#include <vector>
using namespace std;
float findMax(float A[], int n)
{
    if (n == 1)
        return A[0];
    return max(A[n-1], findMax(A, n-1));
}
void bucketSort(float arr[], int n)
{
    float max=findMax(arr,n);
    vector<float> b[n];
    // 2) Put array elements in different buckets
    for (int i=0; i<n; i++)
    {
    int bi = n*arr[i]/(max+1); // Index in bucket
    b[bi].push_back(arr[i]);
    }
    // 3) Sort individual buckets
    for (int i=0; i<n; i++)
    sort(b[i].begin(), b[i].end());
    // 4) Concatenate all buckets into arr[]
    int index = 0;
    for (int i = 0; i < n; i++)
        for (int j = 0; j < b[i].size(); j++)
        arr[index++] = b[i][j];
}
int main()
{
    int n;
    cin>>n;
    float arr[n];
    for(int i=0;i<n;i++)
    cin>>arr[i];
    bucketSort(arr, n);
    cout << "Sorted array is \n";
    for (int i=0; i<n; i++)
    cout << arr[i] << " ";
    return 0;
}
```

OUTPUT

```
10
0.67
0.56
4.6
0.5
0.764
0.234
0.954
0.5
0.34
6.5
Sorted array is
0.234 0.34 0.5 0.5 0.56 0.67 0.764 0.954 4.6 6.5 %
jatin@Jatins-MacBook-Air Algos %
```