```cpp
/*
CS1110 - Assignment 6

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*/
#include <iostream>
#include <fstream>
#include <string>
using namespace std;

void readdata(int, int[], int[]);
void printarray(int, int[]);
float average(int, int[]);
void addonto(int, int[], int[], int[]);

int main()
{
    ifstream Size;
    Size.open("datafile.txt");  // Has 31 lines of data

    int n = 0;
    Size >> n;
    int first[n];
    int second[50];

    readdata(n, first, second);     // Reads in all 31 lines of data but using only 12 lines of data
    cout << "Printing first array: " << endl;
    cout << endl;

    printarray(12, first);     // Prints the first 12 lines of data only
    cout << endl;
    cout << endl;

    cout << "Printing second array: " << endl;
    cout << endl;

    printarray(12, second);
    cout << endl;
    cout << endl;

    cout << "The average of the first array: " << endl;
    cout << endl;
    cout << average(12, first);     // Averages the first 12 lines of data only
    cout << endl;
    cout << endl;
    cout << "The average of the second array: " << endl;
    cout << endl;
    cout << average(12, second);
    cout << endl;
    cout << endl;

    cout << "Second array added to the first array: " << endl;
    addonto(12, first, second, first);
    printarray(24, first);

    cout << endl;
    cout << endl;

    cout << "First array added to the second array: " << endl;
    addonto(12, second, first, second);
    printarray(24, second);

    cout << endl;
    cout << endl;
```

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66      cout << "The average of the new first array: " << endl;
67      cout << endl;
68      cout << average(24, first);
69      cout << endl;
70      cout << endl;
71      cout << "The average of the new second array: " << endl;
72      cout << endl;
73      cout << average(24, second);
74      cout << endl;
75      cout << endl;
76
77      return 0;
78  }
79
80  void readdata(int n, int numb1[], int numb2[])
81  {
82      ifstream Size;
83      Size.open("datafile.txt");
84      for(int i=0; i<n; i++)  // First line in data file "31" determines how many
lines of data to read
85      {
86          Size >> numb1[i] >> numb2[i];
87      }
88  }
89
90  void printarray(int q, int numb[])
91  {
92      for(int i=1; i<=q; i++)   // Skips the first line because "31" is lines of data
in each column
93      {
94          cout << numb[i] << "  ";
95          if(i%5==0)
96              cout << endl;
97      }
98  }
99
100 float average(int k, int p[])
101 {
102     float result = 0.0;
103     int sum = 0;
104     for(int i=1; i<=k; i++)
105     {
106         sum += p[i];
107     }
108     result = float(sum) / k;
109     return result;
110 }
111
112 void addonto(int m, int r[], int s[], int t[])
113 {
114     int u = m+1;    // Starts the assignment at the end of the array
115     for(int i=1; i<=m; i++)
116     {
117         t[i] = r[i];
118         t[u] = s[i];
119         u++;
120     }
121 }
```