

The picture below show my answer to the question given by the lecturer:

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      const int SIZE=5, TotalSIZE = SIZE*2;
6      int array1[SIZE],array2[SIZE],array3[SIZE*2];
7      int sum=0;
8      double average;
9      int OddNumber = 0;
10     int highest ;
11     int smallest;
12     int range;
13
14
15     cout<<"Enter table array1: "<<endl;
16
17     for(int i=0; i < SIZE; ++i)
18     {
19         cout<<"Please enter an integer: ";
20         cin>>array1[i];
21     }
22     cout<<endl;
23     cout<<"Enter table array2: "<<endl;
24     for(int i=0; i < SIZE; ++i)
25     {
26         cout<<"Please enter an integer: ";
27         cin>>array2[i];
28     }
29     for(int i= 0; i < SIZE; ++i)
30     {
31         array3[i] = array1[i];
32         array3[i + SIZE]=array2[i];
33     }
34     cout<<endl;
35     cout<<"OUTPUT:"<<endl;
36     cout<<"Table array3:"<<endl;
37     for(int i=0; i < SIZE*2; ++i)
38     {
39         cout<<array3[i]<<" ";
40     }
41     cout<<endl;
42
43     highest = array3[0];
44     smallest = array3[0];
45     for (int i=0; i<TotalSIZE; ++i)
46     {
47         sum += array3[i];
48         if ( array3[i] % 2 != 0)
49         {
50             OddNumber++;
51         }
52         if(array3[i] > highest)
53         {
54             highest = array3[i];
55         }
56         if(array3[i] <smallest)
57         {
58             smallest = array3[i];
59         }
60     }
61     range = highest - smallest;
62
63     average = static_cast<double>(sum) / TotalSIZE;
64     cout<<"The average of ten numbers in array3 = "<<average<<endl;
65     cout <<"The range of values in array3 = "<<range<<endl;
66     cout<<"The number of odd numbers in array3 = " <<OddNumber<<endl;
67
68
69
70
71     return 0;
72 }
```

```
input.txt
File Edit View

101 233 20
102 234 15
103 67 10
104 93 10
105 34 50
106 93 11
107 72 12
108 56 18
109 82 19
110 109 20

Ln 1, Col 1 | 109 characters
```

```
1 #include <iostream>
2 #include <fstream>
3 #include <iomanip>
4 using namespace std;
5
6 void Input(int [], float [], float [], int);
7 void Output(int [], float [], float [], int);
8
9 int main()
10 {
11     const int SIZE = 10;
12     int ItemNo[SIZE];
13     float Price[SIZE];
14     float Discount[SIZE];
15
16     Input(ItemNo, Price, Discount, SIZE);
17     Output(ItemNo, Price, Discount, SIZE);
18
19     return 0;
20 }
21
22 void Input(int ItemNo[], float Price[], float Discount[], int SIZE)
23 {
24     ifstream outputFile;
25
26     outputFile.open("input.txt");
27
28     if (outputFile.fail())
29     {
30         cout<< "ERROR: Cannot open file\n";
31         exit(1);
32     }
33     else
34     {
35         for( int i=0; i<SIZE ; i++)
36         {
37             outputFile >> ItemNo[i];
38             outputFile >> Price[i];
39             outputFile >> Discount[i];
40         }
41     }
42
43 void Output(int ItemNo[], float Price[], float Discount[], int SIZE)
44 {
45     cout<<"Number of items on sale\n";
46     cout<<"-----\n";
47     cout<< right << setw(10)<<"Item No"<<setw(10)<<"Price "<<setw(10)<<" Discount(%) "<<setw(15)<<" Price after discount "<<endl;
48
49     for(int i=0 ; i<SIZE ; i++)
50     {
51         float price_after_discount = Price[i] - (Discount[i]/100)*Price[i];
52         cout<<right << setw(10)<<ItemNo[i]<<setw(10)<<Price[i]<<setw(10)<<Discount[i]<<setw(15)<<price_after_discount<<endl;
53     }
54 }
55 }
```