

Practical 3 :

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#include <iostream>
#include <vector>
#include <omp.h>

using namespace std;

int main() {
    vector<int> data = {1, 5, 3, 7, 9, 2, 6, 4, 8};
    int min_val = INT_MAX;
    int max_val = INT_MIN;
    int sum = 0;

    #pragma omp parallel for reduction(min:min_val) reduction(max:max_val) reduction(+:sum)
    for (size_t i = 0; i < data.size(); ++i) {
        if (data[i] < min_val) {
            min_val = data[i];
        }
        if (data[i] > max_val) {
            max_val = data[i];
        }
        sum += data[i];
    }

    double average;
    #pragma omp parallel reduction(+:average)
    {
        average = (double)sum/ data.size();
    }

    cout << "Minimum: " << min_val << endl;
    cout << "Maximum: " << max_val << endl;
    cout << "Sum: " << sum << endl;
    cout << "Average: " << average << endl;

    return 0;
}
```

OUTPUT :

Minimum: 1

Maximum: 9

Sum: 45

Average: 5