

**Class: B.E. A**  
**Batch: A1**  
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**LP-V HPC lab-1**

\*\*\*\*\* **CODE** \*\*\*\*\*

```
#include <iostream>
#include <vector>
#include <omp.h>
using namespace std;

int main() {
    int n;
    cout << "Enter number of elements: ";
    cin >> n;
    vector<double> arr(n);

    cout << "Enter elements: " << endl;
    for (double &x : arr) {
        cin >> x;
    }

    double min_val = arr[0], max_val = arr[0], sum = 0.0, avg = 0.0;

    #pragma omp parallel for reduction(min:min_val) reduction(max:max_val)
    reduction(+:sum)

    for (int i = 0; i < n; i++) {
        if (arr[i] < min_val) min_val = arr[i];
        if (arr[i] > max_val) max_val = arr[i];
        sum += arr[i];
    }

    avg = sum / n;

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

```
cout << "Average: " << avg << endl;  
return 0;  
}
```

\*\*\*\*\* OUTPUT \*\*\*\*\*

Enter number of elements: 5

Enter elements:

123

45

6

678

98

Minimum: 4

Maximum: 678

Sum: 798

Average: 159.6