**14162 HPC PR 2A**

**Title: Write a program to implement Parallel Bubble Sort using OpenMP**

#include<iostream>

#include<stdlib.h>

#include<omp.h>

using namespace std;

void bubble(int \*, int);

void swap(int &, int &);

void bubble(int \*a, int n)

{

for( int i = 0; i < n; i++ )

{

int first = i % 2;

#pragma omp parallel for shared(a,first)

for( int j = first; j < n-1; j += 2 )

{

if( a[ j ] > a[ j+1 ] )

{

swap( a[ j ], a[ j+1 ] );

}

}

}

}

void swap(int &a, int &b)

{

int test;

test=a;

a=b;

b=test;

}

int main()

{

int \*a,n;

cout<<"\n enter total no of elements=>";

cin>>n;

a=new int[n];

cout<<"\n enter elements=>";

for(int i=0;i<n;i++)

{

cin>>a[i];

}

bubble(a,n);

cout<<"\n sorted array is=>";

for(int i=0;i<n;i++)

{

cout<<a[i]<<endl;

}

return 0;

}

