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#include "rk4_solver.hh"
#include <cstdlib>
#include <ctime>
#include <cstdio>
#include <iostream>
#include <math.h>
#include <omp.h>

int main(){
    double T_final = 1000.0;
    double hi_step = 1;
    double tolerance = 0.000001;
    double J = -0.5;
    double K = -0.5;
    double N_intrvls = 200;
    rk4 myRk4(hi_step, tolerance, J, K, N_intrvls);
    double t1 = omp_get_wtime();
    myRk4.compute_solution(T_final);
    double t2 = omp_get_wtime();
    myRk4.terminate();
    printf("Total Computation Time: %f\n", t2-t1);
    return 0;
}
```