pro3.md 5/30/2021

```
#include<iostream>
#include <omp.h>
#include<sys/time.h>
using namespace std;
typedef long long ll;
const ll TIME = 1e7 ;
#define threads 2
int main(){
    // omp_set_num_threads(10);
    double start,stop;
    struct timeval tv;
    gettimeofday(&tv, NULL);
    start = (tv.tv_sec) * 1000 + (tv.tv_usec) / 1000;
    ll total = 0, i;
    double x,y;
    srand(time(NULL));
    #pragma omp parallel for reduction(+:total) private(x,y)
num_threads(threads)
        for(i=0; i<TIME; i++){</pre>
            x = (double)rand()/(double)RAND_MAX;
            y = (double)rand()/(double)RAND_MAX;
            if( x*x + y*y <= 1.0) total++;
        }
    gettimeofday(&tv, NULL);
    stop = (tv.tv_sec) * 1000 + (tv.tv_usec) / 1000;
    cout<<(double)total / (double)TIME * (double)4<<endl;</pre>
    cout<<"total time is: "<<stop-start<<" ms"<<endl;</pre>
    return 0;
}
```