

Multiply two matrix

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#include <iostream>
#include <pthread.h>
#include <cstdlib>
using namespace std;
#define MAX 4
#define MAX_THREAD 4
int matA[MAX][MAX];
int matB[MAX][MAX];
int matC[MAX][MAX];
int step_i = 0;
void multi(void* arg){
    int i = step_i++;
    for (int j = 0; j < MAX; j++) {
        for (int k = 0; k < MAX; k++) {
            matC[i][j] += matA[i][k] * matB[k][j];}}
}
int main() {
    for (int i = 0; i < MAX; i++) {
        for (int j = 0; j < MAX; j++) {
            matA[i][j] = rand() % 10;
            matB[i][j] = rand() % 10; } }
    cout << "Matrix A" << endl;
    for (int i = 0; i < MAX; i++) {
        for (int j = 0; j < MAX; j++) {
            cout << matA[i][j] << " ";}
        cout << endl;}
    cout << "Matrix B" << endl;
    for (int i = 0; i < MAX; i++) {
        for (int j = 0; j < MAX; j++) {
            cout << matB[i][j] << " ";}
        cout << endl;}
    pthread_t threads[MAX_THREAD];
    for (int i = 0; i < MAX_THREAD; i++) {
        int* p = nullptr;
        pthread_create(&threads[i], nullptr,
            (void* (*)(void*))multi, (void*)p);}
    for (int i = 0; i < MAX_THREAD; i++) {
        pthread_join(threads[i], nullptr);}
    cout << "Multiplication of A and B" << endl;
    for (int i = 0; i < MAX; i++) {
        for (int j = 0; j < MAX; j++) {
            cout << matC[i][j] << " ";}
        cout << endl;}
    return 0;}
```