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//CSC382 Lab1.5

//2/28/17

#include <iostream>

#include <stdio.h>

#include <time.h>

#include <cmath>

using namespace std;

void main() {

srand(time(NULL));

int n[] = {1e2, 1e3, 1e4, 1e5, 1e6, 1e7, 1e8};

printf("%s%15s%15s\n", "Total num", "Num Hit", "Pi");

for (int i = 0; i < 7; i++) {

int hit = 0;

for (int j = 0; j < n[i]; j++) {

float distance = 0;

float x = (float)rand() / RAND\_MAX;

float y = (float)rand() / RAND\_MAX;

distance = sqrt(pow(x, 2) + pow(y, 2));

if (distance < 1)

hit++;

}

printf("%9d%15d%15f\n", n[i], hit, (float)hit / n[i] \* 4);

}

system("pause");

}

