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//Monte Carlo  to estimate the value of PI using c/c++

#include<iostream>
#include <cstdlib>
#include <iostream>
#include <cmath>
using namespace std;

int main() {
    double x;
    double y;
    double r;
    double Pi_value;
    double hit = 0;
    int Total_tries = 20000;
    //Generate a random x and y coordinate
    for (int i= 0; i <=Total_tries; i++){
        x=(double)rand()/(RAND_MAX);
        y=(double)rand()/(RAND_MAX);
    // Lets see if this point is inside unit circle or not
        r=sqrt(x*x + y*y);

        if (r<=1){
            hit++;
        }

    }

    Pi_value=(4*hit)/(Total_tries);

    cout <<"Our value of pi is  = " << Pi_value;
    return 0;

}

```