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

int main()
{
    ofstream fout("test18.dat");
    srand(time(NULL));
    int N=1000, n=100, r, a[N],c[2*n];
    double x,y,s,p[2*n];

    for(int i=0; i<=N; i+=1)
    {
        x=0;
        r = (rand()%n)+1;
        for(int j=0; j<=r; j+=1)
        {
            s=(double)rand()/((double)RAND_MAX);
            if(s>0.5)
            {
                x+=1;
            }

            else
            {
                x-=1;
            }
        }

        a[i]=x;
    }

    for(int i=-n; i<=n; i+=1)
    {
        y=0;
        for(int j=0; j<=N; j+=1)
        {
            if(i==a[j])
            {
                y+=1;
            }
        }

        c[i+n]=y;
    }

    for(int i=0; i<2*n; i+=1)
    {
        p[i]=(double)c[i]/(double)N;
        fout << i-n << " " << p[i] << endl;
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}
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    return 0;
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}
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