program laba12;

{$APPTYPE CONSOLE}

{$R \*.res}

uses

System.SysUtils,

MODUL12 in 'MODUL12.pas';

const Nmax = 5;

Type matrix = array[1..Nmax,1..Nmax] of shortint;

procedure vvodmatrix(var testt: TextFile;const nn : byte; out aa:matrix);

var i, j : byte;

begin

for i := 1 to nn do

begin

for j := 1 to nn do read(testt,aa[i,j]);

readln(testt);

end;

end;

procedure vivodmatrix(var answerr: TextFile; const Nn : integer; var Aa : matrix);

var i,j : integer;

begin

writeln(answerr, 'матрица: '+ #13#10);

for i := 1 to Nn do

begin

for j := 1 to Nn do write(answerr,Aa[i][j], ' ');

writeln(answerr);

end;

writeln(answerr);

end;

function checkmatrix(const nn: byte; const aa : matrix; out ii, jj : byte) : boolean;

var flag : boolean; i, j : byte;

begin

flag := True;

ii := 0; jj:=0;

i := 1;

while (i <= nn) and (flag) do

begin

j:= 1;

while (j <= nn) and (flag) do

begin

if (aa[i][j] < -100) or (aa[i][j] > 100) then

begin

ii := i; jj := j;

flag := False;

end;

j := j + 1;

end;

i:= i + 1;

end;

checkmatrix := flag;

end;

function checkusl(const Nn: byte; const Aa : matrix) : boolean;

var flag : boolean; i, j : byte; counter : integer;

begin

flag:= true;

j := 1;

while (j <= nn) and (flag) do

begin

i:= 1;

counter := 0;

while (i <= nn) and (flag) do

begin

if aa[i][j] = 0 then

begin

counter := counter + 1;

end;

if counter > 1 then flag := False;

i := i + 1;

end;

j:= j + 1;

end;

checkusl := flag;

end;

function PoiskSumVerhDiag(const Nn : byte; const Aa: matrix) : integer;

var sum : integer; i, j : byte;

begin

sum := 0;

for i := 1 to nn do

begin

j := i;

while j <= nn do

begin

sum := sum + aa[i][j];

j := j + 1;

end;

end;

PoiskSumVerhDiag := sum;

end;

var

N, q, w: byte;

A: matrix;

test, answer : TextFile;

begin

AssignFile(test, ParamSTR(1));

reset(test);

AssignFile(answer, ParamSTR(2));

append(answer);

read(test, N);

if(N<2) or( N>5) then

begin

writeln(answer, 'N = ', N);

writeln(answer, 'Некорректное число строк');

closefile(test);

//closefile(test); closefile(answer);

end

else

begin

vvodmatrix(test, n, a);

closefile(test);

vivodmatrix(answer, N, A);

if not checkmatrix(n, a , q, w) then

begin

writeln(answer, 'элемент матрицы ', q , ' строки и ', w, ' столбца, а именно: ',a[q][w] );

writeln(answer, 'является некорректным, так как не входит в диапазон [-100; 100]');

//closefile(answer);

end

else

begin

if not (checkusl(N, A)) then

begin

writeln(answer, 'В матрице содержится стобец, в котором содержится более чем один нулевой элемент');

//closefile(answer);

end

else

begin

writeln(answer, 'Сумма элементов матрицы на вехней диагонали и над нею: ', PoiskSumVerhDiag(N, A));

end;

end;

end;

writeln(answer, '\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_');

closeFile(answer);

end.