Subiectul 2

#include <iostream>

#include <fstream>

using namespace std;

ifstream fin("atestat.in");

ofstream fout("atestat.out");

int n,x[31];

void citire(){

fin>>n;

for(int i=1;i<=n;i++){

fin>>x[i];

}

}

int prim(int n){

if(n==1 || n==0){

return 0;

}

for(int d=2;d\*d<=n;d++){

if(n%d==0){

return 0;

}

}

return 1;

}

int main()

{

int minn=100000000,maxx=0;

citire();

for(int i=1;i<=n;i++){

if(prim(x[i])==1){

cout<<x[i]<<" ";

}

}

cout<<endl;

for(int i=1;i<=n;i++){

if(x[i]<minn && x[i]%2==1){

minn=x[i];

}

if(x[i]>maxx && x[i]%2==0){

maxx=x[i];

}

}

cout<<maxx<<" "<<minn<<endl;

for(int i=1;i<=n-1;i++){

for(int j=i+1;j<=n;j++){

if(prim(x[i])==1 && prim(x[j])==1 && x[i]+x[j]==maxx && x[i]%2==1 && x[j]%2==1){

fout<<x[i]<<" "<<x[j];

}

}

}

return 0;

}

PROBLEMA 3

#include <iostream>

#include <fstream>

using namespace std;

ifstream fin("atestat.in");

ofstream fout("atestat.out");

int n,x[100];

void citire(){

fin>>n;

for(int i=1;i<=n;i++){

fin>>x[i];

}

}

int main()

{

citire();

for(int i=1;i<=n;i++)

{

if(x[i]%2==0){

cout<<x[i]<<" ";

}

}

cout<<endl;

int b=0,a=100000000;

for(int i=1;i<=n;i++)

{

if(x[i]>b){

b=x[i];

}

if(x[i]<a){

a=x[i];

}

}

cout<<a<<endl;

cout<<b<<endl;

int r=0;

while(b!=0){

r=a%b;

a=b;

b=r;

}

fout<<a;

return 0;

}

PROBLEMA 4

#include <iostream>

#include <fstream>

using namespace std;

ifstream fin("atestat.in");

ofstream fout("atestat.out");

int n,x[100];

void citire(){

fin>>n;

for(int i=1;i<=n;i++){

fin>>x[i];

}

}

int main(){

citire();

for(int i=1;i<=n;i++){

if(x[i]%2==1){

cout<<x[i]<<" ";

}

}

cout<<endl;

int ok,k=0,copie=0;

for(int i=1;i<=n;i++){

copie=x[i];

ok=1;

while(copie!=0){

if(copie%2==1){

ok=0;

}

copie=copie/10;

}

if(ok==1){

cout<<x[i]<<" ";

k++;

}

}

if(k==0){

cout<<"nu exista";

}

cout<<endl;

copie=x[1];

int v[10]={};

while(copie!=0){

v[copie%10]++;

copie=copie/10;

}

int maxx=0;

for(int i=9;i>=1;i--){

if(v[i]>0){

maxx=maxx\*10+i;

}

}

int minn=0;

for(int i=1;i<=9;i++){

if(v[i]>0){

minn=minn\*10+i;

}

}

fout<<maxx<<" "<<minn;

}

PROBLEMA 5

#include <iostream>

#include <fstream>

using namespace std;

ifstream fin("atestat.in");

ofstream fout("atestat.out");

int n,x[100];

void citire(){

fin>>n;

for(int i=1;i<=n;i++){

fin>>x[i];

}

}

int prim(int n){

if(n==1 || n==0){

return 0;

}

for(int d=2;d\*d<=n;d++){

if(n%d==0){

return 0;

}

}

return 1;

}

int main(){

citire();

for(int i=1;i<=n;i++){

if(x[i]%2==0){

cout<<x[i]<<" ";

}

}

cout<<endl;

int ok,k=0,copie=0;

for(int i=1;i<=n;i++){

copie=x[i];

ok=1;

while(copie!=0){

if(copie%2==0){

ok=0;

}

copie=copie/10;

}

if(ok==1){

cout<<x[i]<<" ";

k++;

}

}

if(k==0){

cout<<"nu exista";

}

cout<<endl;

cin>>k;

int nr=0;

for(int i=1;i<=n;i++){

copie=x[i];

for(int d=2;d\*d<=copie;d++){

if(n%d==0 && prim(d)==1){

if(d\*d==copie){

nr++;

}

else{

nr=nr+2;

}

}

}

if(nr==k){

fout<<x[i]<<" ";

}

}

}

PROBLEMA 6

#include <iostream>

#include <fstream>

#include <iomanip>

using namespace std;

ifstream fin("atestat.in");

ofstream fout("atestat.out");

int n;

double x[100];

void citire(){

fin>>n;

for(int i=1;i<=n;i++){

fin>>x[i];

}

}

int main(){

citire();

for(int i=1;i<=n;i++){

cout<<x[i]<<" ";

}

cout<<endl;

double k=0,s=0;

for(int i=1;i<=n;i++){

if(x[i]<0){

k++;

s=s+x[i];

}

}

if(k==0){

cout<<"nu exista";

}

else{

cout<<fixed<<setprecision(2)<<s/k;

}

cout<<endl;

int p1,p2;

double aux;

cin>>p1>>p2;

for(int i=p1;i<=p2-1;i++){

for(int j=i+1;j<=p2;j++){

if(x[i]>x[j]){

aux=x[i];

x[i]=x[j];

x[j]=aux;

}

}

}

for(int i=1;i<=n;i++){

fout<<x[i]<<" ";

}

}

PROBLEMA 7

#include <iostream>

#include <fstream>

using namespace std;

ifstream fin("atestat.in");

ofstream fout("atestat.out");

int n,x[100];

void citire(){

fin>>n;

for(int i=1;i<=n;i++){

fin>>x[i];

}

}

int nr\_cifre(int n){

int nr=0;

while(n!=0){

nr++;

n=n/10;

}

return nr;

}

int main()

{

citire();

for(int i=n;i>=1;i--)

{

cout<<x[i]<<" ";

}

cout<<endl;

for(int i=1;i<=n;i++)

{

cout<<nr\_cifre(x[i])<<" ";

}

cout<<endl;

int s=0;

for(int i=1;i<=n;i++)

{

if(x[i]%2==1){

s=s+x[i];

}

}

fout<<s;

}

Problema 8

#include <iostream>

#include <fstream>

using namespace std;

ifstream fin("atestat.in");

ofstream fout("atestat.out");

int n,a[100];

void citire(){

fin>>n;

for(int i=1;i<=n;i++){

fin>>a[i];

}

}

int nr\_cifre(int n){

int nr=0;

while(n!=0){

nr++;

n=n/10;

}

return nr;

}

int main()

{

citire();

for(int i=n;i>=1;i--)

{

cout<<a[i]<<" ";

}

cout<<endl;

int x,ok=0;

cin>>x;

for(int i=1;i<=n;i++)

{

if(a[i]==x){

ok=1;

}

}

if(ok==1){

cout<<"DA";

}

else{

cout<<"NU";

}

cout<<endl;

int s=0;

for(int i=1;i<=n;i++)

{

s=s+a[i];

}

fout<<s;

}

Problema 9

#include <iostream>

#include <fstream>

using namespace std;

ifstream fin("atestat.in");

ofstream fout("atestat.out");

int n,a[100][100]={};

void citire(){

fin>>n;

for(int i=1;i<=n;i++){

for(int j=1;j<=n;j++){

fin>>a[i][j];

}

}

}

int prim(int n){

if(n==1 || n==0){

return 0;

}

for(int d=2;d\*d<=n;d++){

if(n%d==0){

return 0;

}

}

return 1;

}

int main()

{

citire();

for(int i=1;i<=n;i++){

for(int j=1;j<=n;j++){

cout<<a[i][j]<<" ";

}

cout<<endl;

}

int k;

cin>>k;

for(int i=1;i<=n;i++){

a[i][n-i+1]=k;

}

for(int i=1;i<=n;i++){

for(int j=1;j<=n;j++){

cout<<a[i][j]<<" ";

}

cout<<endl;

}

int ok=0;

for(int i=1;i<=n;i++){

for(int j=1;j<=n;j++){

if(prim(a[i][j])==1){

ok=1;

fout<<a[i][j]<<" ";

}

}

}

if(ok==0){

fout<<"NU";

}

}

Problema 17

#include <cstring>

#include <iostream>

using namespace std;

int main() {

char s[200],litera,\*p;

int k=1;

cin.getline(s,200);

cin>>litera;

cout<<"a)\n";

for (int i = 0; i < strlen(s); i++) {

if (s[i] >= 'A' && s[i] <= 'Z'){

cout<<char(s[i]+('a' - 'A'));

}

else{

cout << s[i];

if(s[i]==' '){

k++;

}

}

}

cout<<"\nb)\n";

cout<<'\n'<<k<<'\n';

p=strtok(s," ");

while(p!=NULL){

if(p[0]!='M'){

cout<<p<<" ";

}

else{

cout<<litera<<p+1<<" ";

}

p=strtok(NULL," ");

}

}