1.

#include<iostream>

using namespace std;

int main()

{

int n1=22;

int n2=33;

int n3;

n3=n1+n2;

cout<<"add="<<n3<<endl;

n3=n1-n2;

cout<<"sub="<<n3<<endl;

n3=n1\*n2;

cout<<"mul="<<n3<<endl;

n3=n1/n2;

cout<<"div="<<n3<<endl;

n3=n1%n2;

cout<<"modulus="<<n3<<endl;

return 0;

}

2

#include<iostream>

using namespace std;

int main()

{

float m1,m2,m3;

cout<<"enter m1"<<endl;

cin>>m1;

cout<<"enter m2"<<endl;

cin>>m2;

cout<<"enter m3"<<endl;

cin>>m3;

float avg=(m1+m2+m3)/3;

cout<<"the average of three integers"<<avg;

return 0;

}

3

#include<iostream>

using namespace std;

int main()

{

int n1,n2;

cout<<"enter n1:"<<endl;

cin>>n1;

cout<<"enter n2:"<<endl;

cin>>n2;

if(n1==n2)

{

cout<<"numbers are equal";

}else

{

cout<<"numbers are not equal";

}

return 0;

}

4.

#include<iostream>

using namespace std;

int main()

{

float n1,n2,sum,sub,mul,div;

cout<<"enter n1"<<endl;

cin>>n1;

cout<<"enter n2"<<endl;

cin>>n2;

sum=n1+n2;

cout<<"sum is:"<<sum<<endl;

sub=n1-n2;

cout<<"sub is:"<<sub<<endl;

mul=n1\*n2;

cout<<"mul is:"<<mul<<endl;

div=n1/n2;

cout<<"div is:"<<div<<endl;

return 0;

}

5.

#include<iostream>

using namespace std;

int main()

{

int num;

cout<<"enter an integer:"<<endl;

cin>>num;

if(num%2==0)

{

cout<<num<<"is an even number: "<<endl;

}

else

{

cout<<num<<"is an odd number: "<<endl;

}

return 0;

}

6.

#include<iostream>

using namespace std;

int main()

{

int num;

cout<<"enter an integer: ";

cin>>num;

if(num>0)

{

cout<<num<<"positive integer"<<endl;

}else if(num<0)

{

cout<<num<<"negative integer"<<endl;

}

else

{

cout<<num<<"is zero"<<endl;

}

return 0;

}

7.

#include<iostream>

using namespace std;

int main()

{

char n;

cout<<"enter the string="<<endl;

cin>>n;

if(n=='a'||n=='e'||n=='i'||n=='o'||n=='u'||n=='A'||n=='E'||n=='I'||n=='O'||n=='U')

{

cout<<"vowels"<<endl;

}else{

cout<<"consonants"<<endl;

}

return 0;

}

8.

#include<iostream>

using namespace std;

int main()

{

int num1,num2;

cout<<"enter two integer: ";

cin>>num1>>num2;

int greatest\_num=(num1>num2)?num1:num2;

cout<<"the greatest number is:"<<greatest\_num<<endl;

return 0;

}

9.

#include<iostream>

using namespace std;

int main()

{

int x=9;

int y=6;

cout<<"before swapping x="<<x<<"and y="<<y;

x=x^y;

y=x^y;

x=x^y;

cout<<"\n"<<"after swapping x="<<x<<"and y="<<y;

return 0;

}

10.

#include<iostream>

#include<cmath>

using namespace std;

int main()

{

float n=3.7;

cout<<"floor of 3.7 is"<<floor(n)<<endl;

cout<<"ceil of 3.7 is"<<ceil(n)<<endl;

return 0;

}

11.

#include<iostream>

using namespace std;

int main()

{

int n1=4,n2=5,n3=6,max;

max=(n1>n2)?(n1>n3?n1:n3):(n2>n3 ? n2:n3);

cout<<"maximum number of"<<n1<<","<<n2<<","<<"and"<<" "<<n3<<" "<<"is:"<<max;

return 0;

}

12.

#include<iostream>

using namespace std;

int main()

{

int n1,n2;

cout<<"enter n1:"<<endl;

cin>>n1;

cout<<"enter n2:"<<endl;

cin>>n2;

if(n1==n2)

{

cout<<"numbers are equal";

}else

{

cout<<"numbers are not equal";

}

return 0;

}

13.

#include<iostream>

using namespace std;

int main()

{

int n=4;

if(n%3==0)

{

cout<<n<<" "<<"is divisible by 3";

}

else{

cout<<n<<"it is not divisible by 3";

}

return 0;

}

14.

#include<iostream>

using namespace std;

int main()

{

int i;

for(i=1;i<=10;i++)

{

cout<<i<<endl;

}

return 0;

}

15.

#include<iostream>

using namespace std;

int main()

{

int num;

cout<<"enter an integer:";

cin>>num;

cout<<"multiplication table for"<<num<<endl;

for(int i=1;i<=10;i++)

{

cout<<num<<" \* "<<i<<"="<<num\*i<<endl;

}

return 0;

}

16.

#include<iostream>

using namespace std;

int main()

{

int i,n,fact=1;

cout<<"enter the value n";

cin>>n;

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

fact=fact\*i;

cout<<"factorial is "<<fact;

return 0;

}

17.

#include<iostream>

using namespace std;

bool is\_prime(int n)

{

if(n<=1)

{

return false;

}

int i=2;

while(i<=n/2){

if(n%i==0){

return false;

}

i++;

}

return true;

}

int main()

{

int n;

cout<<"enter an integer:";

cin>>n;

if(is\_prime(n))

{

cout<<n<<"is a prime number: "<<endl;

}else{

cout<<n<<"is not a prime number: "<<endl;

}

return 0;

}

18.

#include<iostream>

using namespace std;

int main()

{

int a=0;

int b=1;

int c;

int n,i;

cin>>n;

cout<<"length of series:"<<n<<"\n";

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

{

c=a+b;

cout<<a<<"\t";

a=b;

b=c;

}

}

19.

#include<iostream>

using namespace std;

int main()

{

int num,sum\_of\_digits=0;

cout<<"enter an integer: ";

cin>>num;

while(num>0) {

sum\_of\_digits+=num%10;

num/=10;

}

cout<<"the sum of all digits of the number is: "<<sum\_of\_digits<<endl;

return 0;

}

20.

#include<iostream>

using namespace std;

int main()

{

int a,num,temp,sum=0;

cout<<"enter the value a";

cin>>a;

temp=a;

while(a>0)

{

num=a%10;

sum=(sum\*10)+num;

a=a/10;

}

if(temp==sum)

{

cout<<"is palindrome";

}

else

{

cout<<"is not palindrome";

}

return 0;

}

21.

#include<iostream>

using namespace std;

int main()

{

int n1,n2,gcd;

cout<<"enter two numbers:"<<endl;

cin>>n1>>n2;

int temp,i;

if(n2>n1)

{

temp=n2;

n2=n1;

temp=n1;

}

for(i=1;i<=n2;i++){

if(n1%i==0&&n2%i==0)

{

gcd=i;

}

}

cout<<"gcd="<<gcd;

return 0;

}

22.

#include<iostream>

using namespace std;

int main()

{

int n,r;

int sum=0;

while(n>0)

{

r=n%10;

sum=sum+(r\*r\*r);

n=n/10;

}

if(sum==n)

{

cout<<"amstrong number";

}

else

{

cout<<"not amstrong number";

}

}

23.

#include<iostream>

using namespace std;

int main()

{

int i,num,sum,div=0;

cout<<"enter the value to be checked=";

cin>>num;

for(i=1;i<=num;i++)

{

div=num%i;

if(div==0)

sum=sum+i;

}

if(sum==num)

{

cout<<num<<"is perfect number";

}

else

{

cout<<num<<"is not a perfect number";

}

return 0;

}

24.

#include<iostream>

using namespace std;

int facto(int n)

{

int fact=1;

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

fact=fact\*i;

return fact;

}

int detectstrong(int num)

{

int digit,sum=0;

int temp=num;

while(temp!=0)

{

digit=temp%10;

sum=sum+facto(digit);

temp/=10;

}

return sum==num;

}

int main()

{

int num=87;

if(detectstrong(num))

cout<<num<<"is strong number";

else

cout<<num<<"is not strong number";

}

25.

#include<iostream>

using namespace std;

int happynumber(int n)

{

int r,sum=0;

while(n>0)

{

r=n%10;

sum=sum+(r\*r);

n=n/10;

}

return sum;

}

int main()

{

int n,temp;

cin>>n;

cout<<"the given number is:"<<n<<"\n";

temp=n;

while(temp!=1 && temp!=4)

{

temp=happynumber(temp);

}

if(temp==1)

{

cout<<n<<"is happynumber:";

}

else

{

cout<<n<<"is not happy number:";

}

}

26.

#include<iostream>

using namespace std;

bool isharshad(int n)

{

int sum=0;

while(n>0)

{

sum+=n%10;

n/=10;

}

return(n%sum==0);

}

int main()

{

int num1,num2;

cout<<"enter two integers:";

cin>>num1>>num2;

if(isharshad(num1))

{

cout<<num1<<"is harshad number"<<endl;

}

else

{

cout<<num1<<"is not a harshad number:"<<endl;

}

return 0;

}

27.

#include<iostream>

using namespace std;

int main()

{

int num;

cout<<"enter the number";

cin>>num;

int square=num\*num;

int sum=0;

while(square>0)

{

int lastdigit=square%10;

sum=sum+lastdigit;

square=square/10;

}

if(sum==num)

cout<<num<<"is neon num";

else

cout<<num<<"not neon num";

return 0;

}

28.

#include<iostream>

#include<conio.h>

using namespace std;

int main()

{

int n;

cout<<"enter the number";

cin>>n;

if(n%7==0||n%10==7)

{

cout<<n<<"is a buzz number";

}

else

{

cout<<n<<"is not a buzz number";

}

return 0;

}

29.

#include<iostream>

#include<cmath>

using namespace std;

bool is\_narcissistic(int n){

int sum=0;

int digits=0;

int temp=n;

while(temp>0)

{

digits++;

temp/=10;

}

temp=n;

while(temp>0)

{

int digit=temp%10;

sum+=pow(digit,digits);

temp/=10;

}

return sum==n;

}

int main(){

int n;

cout<<"enter an integer";

cin>>n;

if(is\_narcissistic(n))

{

cout<<n<<"is narcissistic number"<<endl;

}

else{

cout<<n<<"is not a narcissistic number"<<endl;

}

return 0;

}

30.

#include<iostream>

using namespace std;

bool is\_abudant(int n)

{

int sum\_of\_division=1;

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

{

if(n%i==0)

{

sum\_of\_division+=i+n/i;

}

}

return sum\_of\_division>n;

}

int main()

{

int n;

cout<<"enter an integer";

cin>>n;

if(is\_abudant(n))

{

cout<<n<<"is an abudant"<<endl;

}

else{

cout<<n<<"is not an abudant"<<endl;

}

return 0;

}

31.

#include<iostream>

using namespace std;

int main()

{

int rows;

cout<<"enter the number of rows";

cin>>rows;

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

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

{

cout<<"\* ";

}

cout<<endl;

}

return 0;

}

32.

#include<iostream>

using namespace std;

int main()

{

int i,j;

for(int i=1;i<=5;i++){

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

{

cout<<i;

}

cout<<"\n";

}

return 0;

}

33.

#include<iostream>

using namespace std;

int main()

{

int i,j;

for(int i=1;i<=5;i++){

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

{

cout<<i;

}

cout<<"\n";

}

return 0;

}

34.

35.

#include<iostream>

using namespace std;

int main()

{

int rows,count=0,count1=0,k=0;

cout<<"enter number of rows:"<<endl;

cin>>rows;

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

{

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

cout<<" ";

++count;

}

while(k!=2\*i-1){

if(count<=rows-1){

cout<<i+k<<" ";

++count;

}

else{

++count1;

cout<<i+k-2\*count1<<" ";

}

++k;

}

count1=count=k=0;

cout<<endl;

}

return 0;

}

36.

#include<iostream>

using namespace std;

int fact(int n)

{

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

{

return 1;

}

else

{

return n\*fact(n-1);

}

}

int main()

{

int n,i;

cin>>n;

cout<<"the given number is :"<<n<<"\n";

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

{

cout<<"the factorial of"<<i<<"is"<<fact(i)<<"\n";

}

return 0;

}

37.

#include<iostream>

using namespace std;

int prime(int n,int i)

{

if(i==1)

{

return 1;

}

else

{

if(n%i==0)

{

return 0;

}

else

{

return prime(n,i-1);

}

}

}

int main()

{

int n,check;

cin>>n;

cout<<"the given number is:"<<n<<"\n";

check=prime(n,n/2);

if(check==1)

{

cout<<"it is a prime number";

}

else

{

cout<<"it is not a prime number:";

}

return 0;

}

38.

#include<iostream>

using namespace std;

int hcf(int a,int b)

{

if(b!=0)

{

return hcf(b,a%b);

}

else

{

return a;

}

}

int main()

{

int a,b;

cin>>a>>b;

cout<<"hcf of "<<a<<" and "<<b<<" is "<<hcf(a,b);

return 0;

}

39.

#include<iostream>

#include<string.h>

using namespace std;

void revstr(char \*str1){

int i,len,temp;

len=strlen(str1);

for(i=0;i<len/2;i++)

{

temp=str1[i];

str1[i]=str1[len-i-1];

str1[len-i-1]=temp;

}

}

int main()

{

char str[50]="sushma";

cout<<"before reversing"<<str;

revstr(str);

cout<<"\n after reversing"<<str;

return 0;

}

40.

#include<iostream>

#include<string.h>

using namespace std;

int main()

{

char str[50];

int count=0,i;

cout<<"enter a string:";

gets(str);

for(i=0;str[i]!='\0';i++)

{

if(str[i]==' ')

count++;

}

cout<<"number of words in the string are:"<<count+i;

return 0;

}

41.

#include<iostream>

using namespace std;

void getMinMax(int arr[],int N){

int max=arr[0],min=arr[0];

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

if(max<arr[i])

max=arr[i];

if(min>arr[i])

min=arr[i];

}

cout<<"Maximum value="<<max<<"\n";

cout<<"Minminum vallue="<<min;

}

int main()

{

int arr[]={2,1,4,6,9,6,4};

int N=7;

getMinMax(arr,N);

return 0;

}

42.

#include<bits/stdc++.h>

using namespace std;

string isPalindrome(string S)

{

string P=S;

reverse(P.begin(), P.end());

if (S==P)

{

return "yes it is a palindrome";

}

else{

return"no it is not a palindrome";

}

}

int main()

{

string S;

cout<<"enter a string"<<endl;

cin>>S;

cout<<isPalindrome(S);

return 0;

}

43.

#include<iostream>

using namespace std;

float area(float r)

{

return 3.14\*r\*r;

}

int main()

{

float r;

cin>>r;

cout<<"radius of circle is"<<r<<"\n";

cout<<"area of circle"<<area(r);

}

44.

#include<iostream>

using namespace std;

float fahrenheit(float k)

{

return 9/5\*k+32;

}

int main()

{

float c;

cin>>c;

cout<<"tempeature in cecius "<<c<<"\n";

cout<<"tempeature in fahrenheit"<<fahrenheit(c);

}

45.

50.

#include<iostream>

using namespace std;

class shape

{

public:

virtual void area()=0;

};

class Rectangle:public shape

{

public:

int l,b;

void getdata()

{

cout<<"enter two values of l and b"<<endl;

cin>>l>>b;

}

void area()

{

cout<<"area="<<l\*b<<endl;

}

};

class circle:public shape

{

public:

int r;

float pi=3.14;

void putdata()

{

cout<<"enter the values of r"<<endl;

cin>>r;

}

void area()

{

cout<<"area="<<pi\*r\*r<<endl;

}

};

int main()

{

Rectangle r1;

r1.getdata();

r1.area();

circle c1;

c1.putdata();

c1.area();

return 0;

}

51.

#include<iostream>

using namespace std;

class animal

{

public:

virtual void speak()=0;

};

class cat:public animal

{

public:

void speak()

{

cout<<"cat speaks meow"<<endl;

}

};

class dog:public animal

{

public:

void speak()

{

cout<<"dog speaks boow"<<endl;

}

};

int main()

{

cat c1;

c1.speak();

dog d1;

d1.speak();

return 0;

}

79.

#include<iostream>

#include<string.h>

using namespace std;

class student

{

int regno,phoneno,age;

char name[20],department[20];

public:

student(int reg\_no,int phone\_no,char \*nm,char \*dept, int pers\_age)

{

regno=reg\_no;

phoneno=phone\_no;

strcpy(name,nm);

strcpy(department,dept);

age=pers\_age;

}

void display();

};

void student::display()

{

cout<<"enter the register number of student:"<<regno<<endl;

cout<<"enter the phone number of the student:"<<phoneno<<endl;

cout<<"enter the name of the student:"<<name<<endl;

cout<<"enter the department of the student:"<<department<<endl;

cout<<"enter the age of the student:"<<age<<endl;

}

int main()

{

int reg\_no,phone\_no,pers\_age;

char nm[20],dept[20];

cout<<"enter the register number:"<<endl;

cin>>reg\_no;

cout<<"enter the phone number:"<<endl;

cin>>phone\_no;

cout<<"enter the name of the student:"<<endl;

cin>>nm;

cout<<"enter the department of the student:"<<endl;

cin>>dept;

cout<<"enter the age of the person:"<<endl;

cin>>pers\_age;

student s1(reg\_no,phone\_no,nm,dept,pers\_age);

s1.display();

return 0;

}

81.

#include<iostream>

using namespace std;

class rectangle

{

public:

int length;

int breadth;

rectangle (int,int);

int area()

{

return (length\*breadth);

}

int length1()

{

return length;

}

int breadth1()

{

return breadth;

}

};

rectangle::rectangle(int x,int y)

{

length=x;

breadth=y;

}

int main()

{

rectangle rect(2,2);

cout<<"length of rectangle"<<rect.length1()<<endl;

cout<<"breadth of rectangle"<<rect.breadth1()<<endl;

cout<<"area of rectangle"<<rect.area()<<endl;

return 0;

}

101.

#include<iostream>

using namespace std;

int main()

{

int n=9;

int array[n]={2,5,6,7,2,3,5,6,2};

int temp;

for( int i=0;i<n/2;i++){

temp= array[i];

array[i]=array[n-i-1];

array[n-i-1]=temp;

}

for(int i=0;i<n;i++)

{

cout<<array[i]<<" ";

}

return 0;

}

102.

#include<iostream>

using namespace std;

int\*X(int n,int arr[],int x,int pos)

{

int i;

n++;

for(i=n;i>=pos;i--)

arr[i]=arr[i-1];

arr[pos-1]=x;

return arr;

}

int main()

{

int arr[100]={0};

int i,x,pos,n=10;

for(i=0;i<10;i++)

arr[i]=i+1;

for(i=0;i<n;i++)

cout<<arr[i]<<" ";

cout<<endl;

x=50;

pos=5;

X(n,arr,x,pos);

for(i=0;i<n+1;i++)

cout<<arr[i]<<" ";

cout<<endl;

return 0;

}

103.

#include<iostream>

using namespace std;

int delete(int arr[],int n,int l,int r){

int i,newindex=0;

for(i=0;i<n;i++){

if(i==1||i>=r){

arr[newindex]=arr[i];

newindex++;

}

}

return newindex;

}

int main()

{

int n=9,l=1,r=6;

int arr[]={1,2,3,4,5,6,7,8,9};

int updated=delete(arr,n,l,r);

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

cout<<arr[i]<<" ";

}

cout<<endl;

return 0;

}

104.

#include<iostream>

using namespace std;

int main()

{

int arr[]={1,2,3,4,5};

int size=sizeof(arr)/sizeof(arr[0]);

int sum=0;

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

sum+=arr[i];

}

cout<<"the sum of elements in array"<<sum<<endl;

return 0;

}

105.

#include<iostream>

using namespace std;

int main()

{

int arr[]={5,6,7,8};

int size=sizeof(arr)/sizeof(arr[0]);

float sum=0.0;

for(int i=0;i<size;i++)

{

sum+=arr[i];

}

float average=sum/size;

cout<<"the average of the elements in array is"<<average<<endl;

return 0;

}

106.

#include<iostream>

using namespace std;

int main(){

int a[100];

int i,n;

int max1=0,max2=0;

cin>>n;

cout<<"no of elements in array is:"<<n<<"\n";

for(i=0;i<n;i++)

{

cin>>a[i];

}

cout<<"the elements in the array is:"<<n<<"\n";

for(i=0;i<n;i++)

{

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

}

max1=a[0];

max2=a[1];

for(i=0;i<n;i++)

{

if(a[i]>max1)

{

max2=max1;

max1=a[i];

}

else if(a[i]>max2 && a[i]!=max1)

{

max2=a[i];

}

}

cout<<"the second largest number is:"<<"\n";

cout<<max2;

}

107.

#include<iostream>

using namespace std;

int main()

{

int n,i;

int a[10];

int count=0;

int k;

cin>>n;

cout<<"no of element in the array is"<<n<<"\n";

for(i=0;i<n;i++)

{

cin>>a[i];

}

cout<<"elements in array is"<<"\n";

for(i=0;i<n;i++)

{

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

}

cin>>k;

cout<<"element to find occurance is"<<k<<"\n";

for(i=0;i<n;i++)

{

if(k==a[i])

count++;

}

cout<<"\n"<<"occurance if the given value"<<count;

return 0;

}

108.

#include<iostream>

using namespace std;

void mergeArrays(int arr1[],int arr2[],int n1,int n2,int arr3[])

{

int i=0,j=0,k=0;

while(i<n1&&j<n2)

{

if(arr1[i]<arr2[j])

{

arr3[k]=arr1[i];

i++;

}else

{

arr3[k]=arr2[j];

j++;

}

k++;

}

while(i<n1)

{

arr3[k]=arr1[i];

i++;

k++;

}

while(j<n2)

{

arr3[k]=arr2[j];

j++;

k++;

}

}

int main()

{

int arr1[]={1,3,5,7};

int arr2[]={2,4,6,8};

int n1=sizeof(arr1)/sizeof(arr1[0]);

int n2=sizeof(arr2)/sizeof(arr2[0]);

int arr3[n1+n2];

mergeArrays(arr1,arr2,n1,n2,arr3);

cout<<"the merged array is:";

for(int i=0;i<n1+n2;i++)

{

cout<<arr2[i]<<" ";

}

cout<<endl;

return 0;

}

109.

#include<iostream>

using namespace std;

int main()

{

int\*p=new int[4];

for(int i=0;i<4;i++)

{

p[i]=8\*(i+1);

}

cout<<\*p<<endl;

cout<<\*p+1<<endl;

cout<<\*(p+1)<<endl;

cout<<2[p]<<endl;

cout<<p[2]<<endl;

\*p++;

cout<<\*p;

return 0;

}

110.

#include<iostream>

using namespace std;

int main()

{

int a[4][2]={

{100,2},{20,3},{30,5},{20,6}

};

int i,j;

cout<<"the 2d array is"<<"\n";

for(i=0;i<4;i++)

{

for(j=0;j<2;j++)

{

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

}

cout<<"\n";

}

}

113.

#include<iostream>

using namespace std;

int main()

{

int n;

cout<<"enter the size of matrix: ";

cin>>n;

int matrix[n][n];

for(int i=0;i<n;i++)

{

for(int j=0;j<n;j++)

{

cin>>matrix[i][j];

}

}

int a=0;

int b=0;

for(int i=0;i<n;i++)

{

a+=matrix[i][i];

b+=matrix[i][n-i-1];

}

cout<<"the sum of a is:"<<a<<endl;

cout<<"the sum of b is:"<<b<<endl;

return 0;

}