1. Harshad number

#include<iostream>

using namespace std;

int main(){

int n,sum=0;

cout<<"enter a number:";

cin>>n;

int a=n;

while(a!=0){

int b=a%10;

sum+=b;

a/=10;

}

if(n%sum==0){

cout<<"harshad number";

}else{

cout<<"not harshad number";

}

return 0;

}

1. Happy number

#include<iostream>

using namespace std;

int main(){

int a,sum=0;

cout<<"enter a number:";

cin>>a;

int temp=a;

while(sum!=1 && sum!=4){

sum=0;

while(temp!=0){

int b=temp%10;

sum+=b\*b;

temp/=10;

}

temp=sum;

}

if(sum==1){

cout<<"happy number";

}else{

cout<<"not happy number";

}

return 0;

}

1. strong number

#include<iostream>

using namespace std;

int fact(int b){

int fact=1;

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

fact\*=i;

}

return fact;

}

int main(){

int a,sum=0;

cout<<"enter a number:";

cin>>a;

int temp=a;

while(temp!=0){

sum+=fact(temp%10);

temp/=10;

}

if(sum==a){

cout<<"strong number:";

}else{

cout<<"not strong number:";

}

return 0;

}

1. buzz number

#include<iostream>

using namespace std;

int main(){

int a;

cout<<"enter a number:";

cin>>a;

if(a%7==0||a%10==7){

cout<<"buzz number";

}else{

cout<<"not buzz number";

}

return 0;

}

1. neon number

#include<iostream>

using namespace std;

int main(){

int a,sum=0;

cout<<"enter a number:";

cin>>a;

int square=a\*a;

cout<<"square="<<square<<endl;

while(square!=0){

int b=square%10;

sum+=b;

square/=10;

}

if(sum==a){

cout<<"neon number"<<endl;

}else{

cout<<"not neon number"<<endl;

}

return 0;

}

1. abundant number

#include<iostream>

using namespace std;

int main(){

int a,sum=0;

cout<<"enter a number:";

cin>>a;

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

if(a%i==0){

sum+=i;

}

}

if(sum>a){

cout<<"abundant number";

}else{

cout<<"not abundant number";

}

return 0;

}

1. narcissistic number

#include<iostream>

using namespace std;

int main(){

int a,b,sum=0;

cout<<"enter a number:";

cin>>a;

int temp=a;

while(temp!=0){

b=temp%10;

sum+=b\*b\*b;

temp/=10;

}

if(sum==a){

cout<<"armstrong";

}else{

cout<<"not armstrong";

}

return 0;

}

1. print the pattern 1 22 333 4444 55555

#include<iostream>

using namespace std;

int main(){

int n=5;

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

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

cout<<i;

}

cout<<endl;

}

return 0;

}

1. print the pattern \* \*\* \*\*\* \*\*\*\* \*\*\*\*\*

#include<iostream>

using namespace std;

int main(){

int n=5;

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

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

cout<<"\*";

}

cout<<endl;

}

return 0;

}

1. Print pascal triangle pattern nested for loop

#include<iostream>

using namespace std;

int fact(int a){

int fact=1;

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

fact\*=i;

}

return fact;

}

int main(){

int n=5;

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

for(int j=0;j<n-i-1;j++){

cout<<" ";

}

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

cout<<fact(i)/(fact(j)\*fact(i-j))<<" ";

}

cout<<endl;

}

return 0;

}

1. Print diamond pattern with \* using nested for loop

#include<iostream>

using namespace std;

int main(){

int n=5;

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

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

cout<<" ";

}

for(int j=1;j<=2\*i-1;j++){

cout<<"\*";

}

cout<<endl;

}

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

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

cout<<" ";

}

for(int j=1;j<=2\*i-1;j++){

cout<<"\*";

}

cout<<endl;

}

return 0;

}

1. Program to reverse the elements in an array

#include<iostream>

using namespace std;

int main(){

int arr[10],i,n;

cout<<"enter a elements:";

cin>>n;

cout<<"enter array elements:";

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

cin>>arr[i];

}

cout<<" elements:";

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

cout<<arr[i]<<endl;

}

cout<<"reverse elements:";

for(i=n;i>=0;i--){

cout<<arr[i]<<endl;

}

return 0;

}

1. Program to insert an element in an array at a specific position
2. Program to Delete an element in an array at a specific position
3. Find the sum of all elements in an array
4. Find the average of all elements in an array
5. Find the second largest element in an array
6. Find the number of occurrences of a value in an array
7. Merge two array
8. Create a dynamic array using pointers and display the values
9. Create a dynamic 2D (Two dimensional) array using pointers and display the values

Add 2 matrices

1. Multiply 2 matrices
2. Find the sum of diagonals of a matrix